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As one of its major activities in carrying out its purpose, the Society publishes a monthly magazine, the Canadian Geographical Journal, which is devoted to every phase of geography—historical, physical and economic—first of Canada, then of the British Empire and of the other parts of the world in which Canada has special interest. It is the intention to publish articles in this magazine that will be

popular in character, easily read, well illustrated and educational to the young, as well as informative to the adult.

The Canadian Geographical Journal will be sent to each member of the Society in good standing. Membership in the Society is open to any one interested in geographical matters. The annual fee for membership is three dollars in Canada.

The Society has no political or other sectional associations, and is responsible only to its members. All money received is used in producing the Canadian Geographical Journal and in carrying on such other activities for the advancement of geographical knowledge as funds of the Society may permit.

Mañana

(TOMORROW)

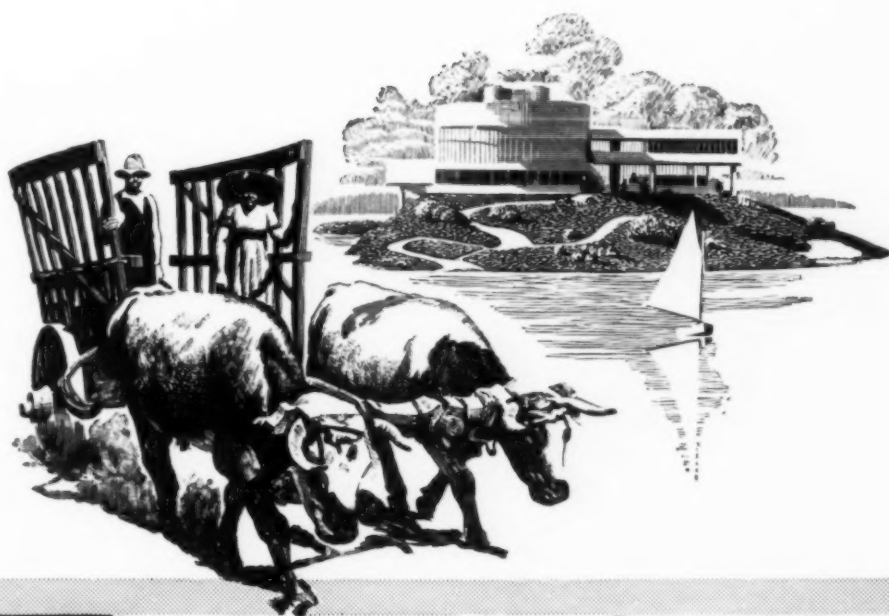
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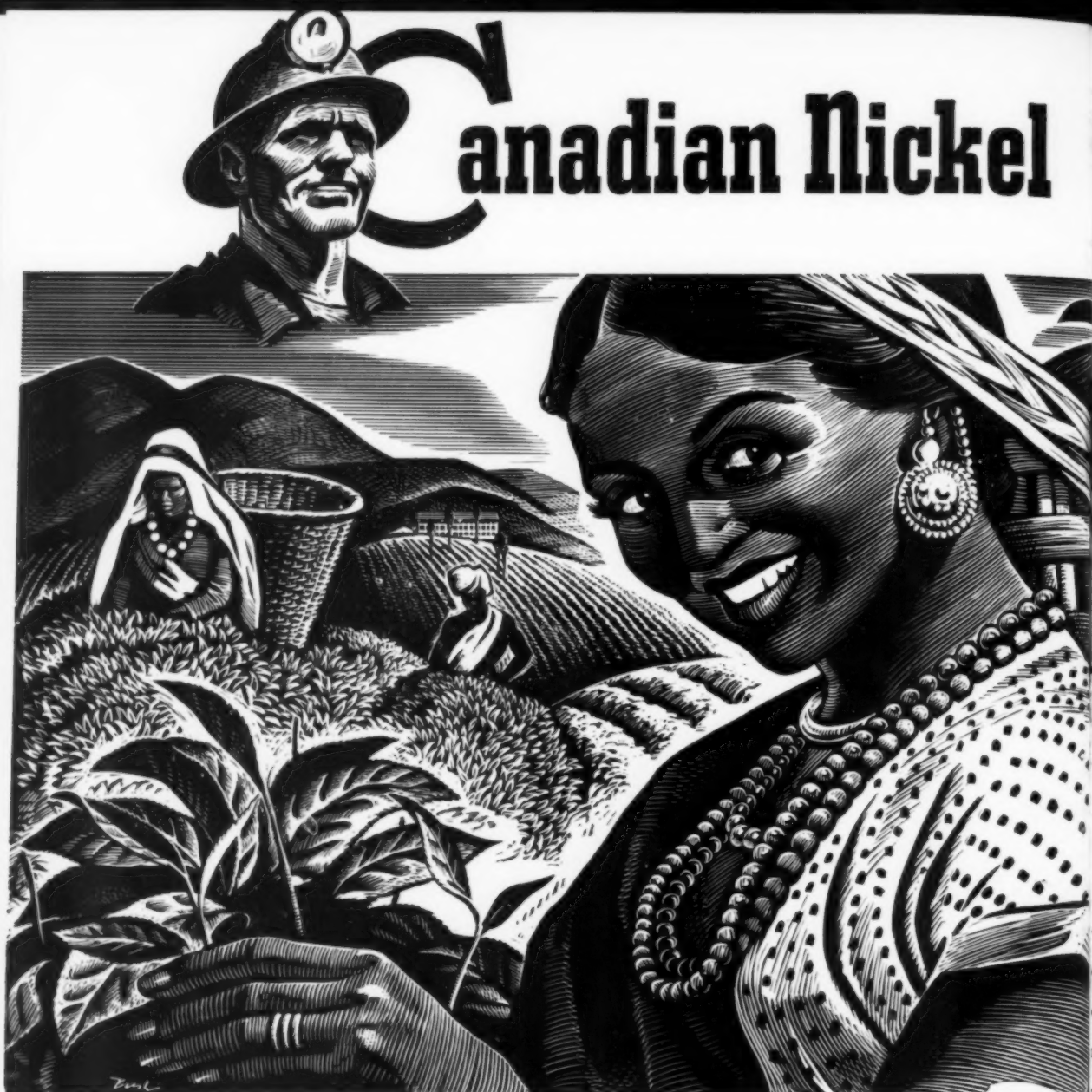
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


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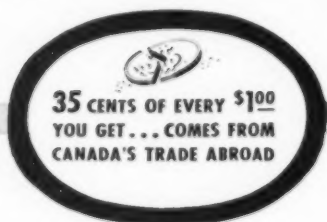
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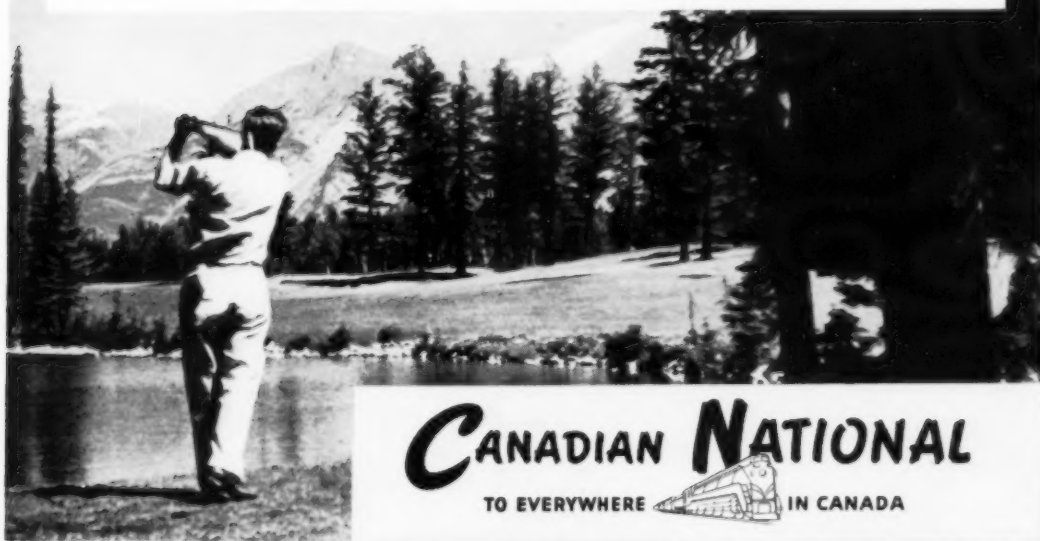
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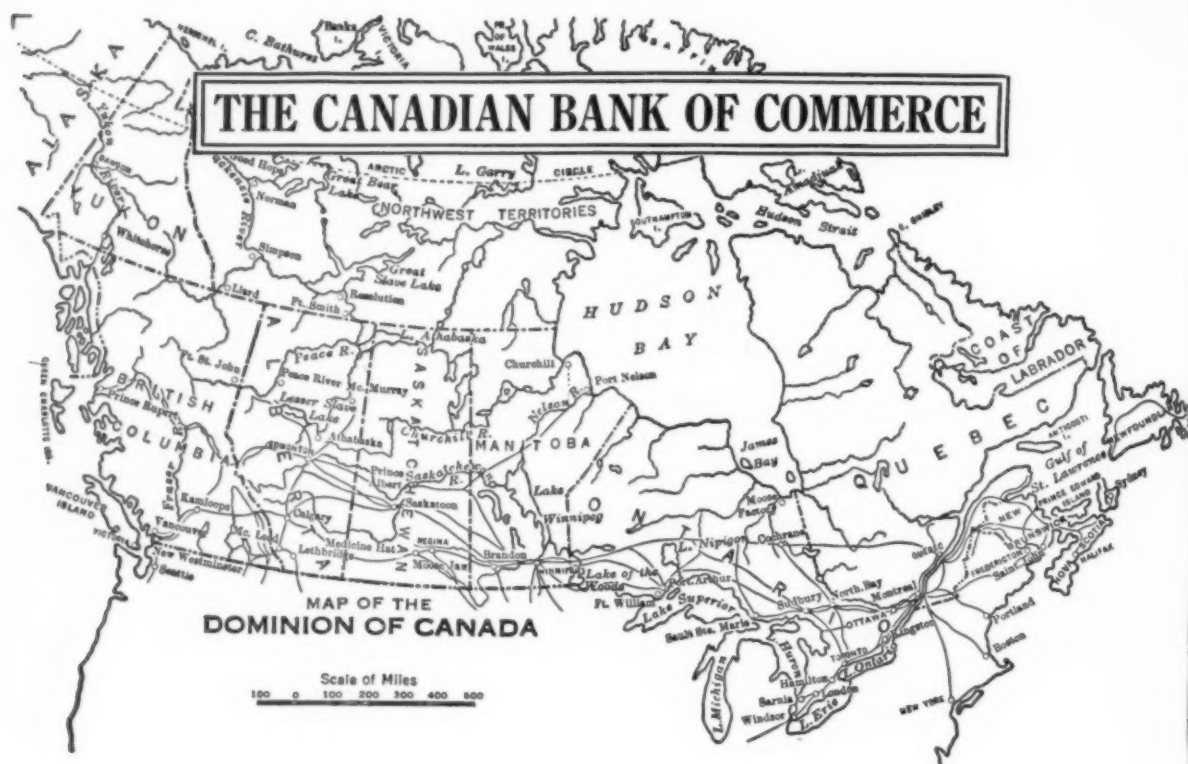
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Editor - GORDON M. DALLYN

This magazine is dedicated to the interpretation, in authentic and popular form, with extensive illustrations, of geography in its widest sense, first of Canada, then of the rest of the British Commonwealth and other parts of the world in which Canada has special interest.

The articles in this Journal are indexed in the *Reader's Guide to Periodical Literature* and the *Canadian Periodical Index* which may be found in any public library.

The British standard of spelling is adopted substantially as used by the Dominion Government and taught in most Canadian schools, the precise authority being the Oxford Dictionary as edited in 1936.

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A Scientist Goes to Moscow*

by A. E. PORSILD

All photographs (with three exceptions) by the author

THE 220th anniversary of the founding of the Academy of Sciences of the U.S.S.R. was celebrated in Moscow and Leningrad during the second half of June, 1945. Tsar Peter the Great is credited with having himself planned the Academy along the lines of learned societies which he visited in the course of his travels abroad. At any rate, he signed the charter on February 10, 1724, but, unfortunately, died before the plan could be executed. His private library formed the nucleus of the Academy Library and his famed "Cabinet of Curiosities" became Russia's first museum. It was left to Catherina I to establish the Academy, which she did, according to Peter's original plans, on December 21, 1725, and on the 27th of the same month the members assembled for the first meeting in what was then known as the Imperial Academy of Sciences of St. Petersburg (Leningrad). The first transactions of the Academy were published in 1728 and were entitled "Commentarii Academiae Scientiarum Imperialis Petropolitanae ad annum 1726".

To the new Academy Catherina brought a number of distinguished foreign scientists; and twenty years later the outstanding Russian scientists, Lomonosov and Butlerov, set up their laboratories here.

From this modest beginning 220 years ago, the Academy now, with its headquarters in Moscow and known as the Academy of Sciences of the U.S.S.R., has become one of the greatest research organizations of the world. Its original motto, *Paulatim* (little by little), still applies, as indeed it does to the progress of science everywhere, but the steps have become longer and longer. Progress has been particularly rapid during the last quarter of a century, during which new research institutes have been set up in nearly all fields of science. Twenty-five years ago the Academy had only three

divisions covering (1) physical and mathematical sciences; (2) Russian languages and literature, and (3) historical science and philology. To-day divisions of chemistry, geology-geography, biology, technology, and economics have been added. In addition to the two headquarters in Moscow and Leningrad, there are branches of the Academy in Transcaucasus, Uzbekistan, Tajekistan, Kazakhstan, Kirghizia, and Turkmen—the last two having been opened during the war. In 1941 the Academy operated 76 research institutes, 42 experiment stations, 11 laboratories, 6 astronomical observatories and 24 museums, in which were working 118 academicians, 5 honorary academicians, 182 corresponding members and 4,700 other scientific and technical personnel. In the year 1939 the Academy was said to have printed books totalling 10,000 signatures, three quarters of which were on natural history and physio-mathematical sciences.

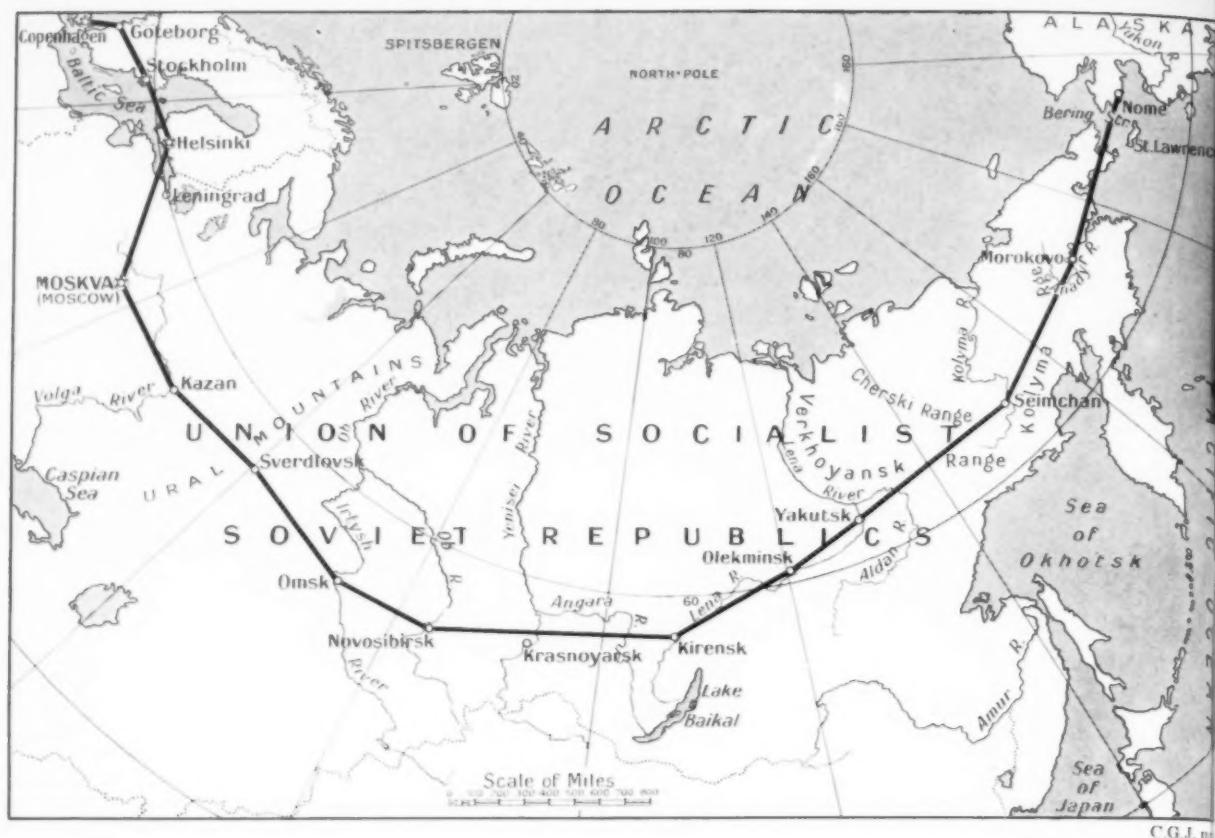
The position of the Academy in the Soviet State actually has no close parallel anywhere. It is quite separate from the universities and is responsible for practically all Russian research. The members, or academicians, are elected by the Academy, and membership is restricted. Their salaries and pensions, said to be in the highest bracket in the Soviet State, are paid by the Government. Thus, in the U.S.S.R. the scientist and his work are recognized as being of the greatest importance in the State; the results of his work are given prominence in the press and the names and the works of prominent scientists in Russia are well known to all.

The position of science in the Soviet Union has been stated by the eminent Russian physicist, Professor Peter Kapitza, as follows:**

"In our socialist country science occupies a special place. Of course it is well known

*See also "My Impressions of the U.S.S.R." by C. J. Ketchum, *Canadian Geographical Journal*, October, 1941, pp. 166-182.

***Nature*, March 10, 1945, p. 294



and commonly accepted in other countries, too, that science plays a great role in the development of the culture and technology of the country. But in our country science is recognized as one of the essential mainstays of the development of culture and is accorded a leading position in the development of our technology and national economy. For this reason the organization of science in our country must have a more purposeful character than that to be found in other countries, where it is rather accidental and spontaneous. The connection between science and life must be close and more complete."

The functions of the Academy of Sciences of the U.S.S.R. he defined as follows:

"It is the chief headquarters of Soviet Science. In my opinion it is called upon to direct all our science ideologically, from top to bottom, along a sound channel. Each of its separate institutes must pursue the same policy; that is, aspire to wield a directing influence on science in the field in which it is working, and strive to bring it into the front ranks. For this reason, the first task which an institute of the Academy of Sciences must set itself is the study of 'pure' science."

The contributions of science towards the material and cultural progress of the U.S.S.R. were by no means halted by the war. On the contrary, scientific development and research made it possible for Russian industry to survive and even expand, despite the great losses suffered during the early years of the war. Even in the fields of so-called "pure" science, Russian scientists were permitted, nay, even encouraged, to continue work on research projects started before the war, and the results of their



The Canadian delegation to the Scientific Congress in Moscow photographed in the railroad station at Leningrad. From left to right: Harold A. Innis, Hans Selye and A. E. Persild.



Birds-eye view of Nome, Alaska, showing the mouth of Snake River and, at upper right corner, the new military airport.

labours have been published despite serious labour and paper shortages.

Therefore, it was a fitting tribute, to the scientists in the U.S.S.R. that the Soviet Government, as an integral part of its celebration of the winning of the war, decided to use the occasion of the 220th Anniversary of the Academy to bring scientific workers together from the far-flung corners of the Union for a country-wide review of their achievements. To this end, from June 15 to July 2, more than 1,200 Russian scientists gathered in Moscow and Leningrad. In addition, the Academy invited delegates of scientific institutions in other parts of the world, and also a few individual scientists, to come as its guests. In all, 127 responded, representing the United States, Canada, Mexico, the United Kingdom, France, Sweden, Finland, Poland, Yugoslavia, Hungary, Romania, Bulgaria, Iran, India, China and Australia.

THROUGH SIBERIA TO MOSCOW

It was the writer's good fortune to go to Moscow (as one of Canada's three delegates), representing The Canadian Geographical Society. With him went Professor Harold A. Innis, head of the Department of Political Geography of the University of Toronto and well known author of books on the fur trade, cod fishery, mining and frontier developments in Canada, and Dr. Hans Selye, histologist in McGill University* and delegate of the Royal Society of Canada.

The party left Ottawa on the afternoon of June 6, travelling by Royal Canadian Air Force plane via Edmonton to Fairbanks, Alaska, where we arrived in the afternoon

*Now Professor of Endocrinology at the University of Montreal.

of the 8th, after a slight delay between Whitehorse and Fairbanks, due to bad weather. On Ladd Airfield we were met by the Russian Colonel in charge of the Soviet Trans-Siberian Air Staging Route, who, after a cordial welcome, took us to quarters arranged for us in the American Officers' Club.

June 9 started with rain and poor visibility at Fairbanks, but at Nome the weather was clear. We met at the airport after lunch, and were conducted to the Russian section of the field where our plane, a Douglas C 47, was waiting. After introducing us to the crew, which consisted of a pilot, an assistant pilot, a mechanic and a girl navigator, our host wished us a pleasant and safe journey. We had expected to share the plane with members of the American delegation to Moscow, but now found that we had the "ship" all to ourselves, since, as we learned later, the Americans had travelled by the South Atlantic route via the Azores, North Africa and Iran. Our plane was beautifully equipped for passenger travel, with comfortable chairs, blue drapes, curtains and deep, soft rugs. We were off at 1 p.m., Fairbanks time, our next stop being Nome, where we landed at 4.30, Nome time, to refuel. Spring had only just arrived and the mountains of Seward Peninsula were still white with last winter's snow. At the head of Norton Sound the winter ice was still unbroken.

After a brief stop at Nome we were off again, following the south shore of Seward Peninsula. South of us, as far as Yukon Delta, the sea was covered with large ice-floes, amongst which were a few open leads, while Bering Strait itself was free of ice. The weather was perfect and the sky without a



On June 8 the winter ice is just breaking up in Bering Strait near Sledge Island west of Nome, Alaska.



Looking west across a mountain range west of the Upper Kolyma River, which can be seen in the foreground.

cloud. Flying at 14,000 feet, we passed directly over King Island from a point south of Teller, and, half way across the strait, had a magnificent and unforgettable vista of the entire Strait and northern Bering Sea, including both Asia and North America. Behind us was Seward Peninsula and Cape Prince of Wales. To the north lay the Diomed Islands, where ten years before I had spent a couple of weeks studying the flora; to the northwest we saw East Cape and ahead the main part of Chukotsk Peninsula, while far to the south we could barely make out the outline of St. Lawrence Island.

The mountainous Chukotsk Peninsula was still in the grip of winter. Low clouds here covered part of the land, but through rifts we looked down on a snow-bound arctic landscape. No trace of green vegetation could be seen, even in the valleys. When crossing the northern portion of the still completely ice-bound Gulf of Anadyr, we

had expected to see native villages along the shore and perhaps the town of Anadyr but, although the clouds were lifting as we neared the land, we were unable, in the almost unbroken white expanse, to pick out any signs of human habitation. The weather cleared completely as we flew inland. The snow had disappeared here and the countryside, which had at first appeared arctic, soon changed to the monotonous, strangely desolate and void, vast flats, through which the River Anadyr meanders. Occasional small clumps of trees provided the only relief. Five hours and twenty minutes out of Nome we circled the native village of Morokovo, and a few minutes later came down on a landing strip by the river bank.

A young Air Force captain met us, and in a jeep drove us a few hundred yards through the single street of a brand-new village built near the new airport. The houses, grouped along the single, broad and well laid out street, were all made of beautifully squared



The wild and rugged unglaciated Cherski Range which is so inaccessible that it was not discovered until 1926.

and dove-tailed poplar logs. Along the road were planted young poplar trees, neatly propped up by solid stakes. The buildings were all one-storied, with low, peaked roofs, ornamental gables and window frames.

We were taken to a small, two-roomed guest house, which had evidently just been made ready for us. The rooms were well furnished and walls and floors covered with very pretty oriental-style rugs. A native woman was preparing a meal for us for which the table was already set, neatly decorated with green pine twigs and branches of alder and willow just coming into leaf.

We were all, including Dr. Selye himself, agreeably surprised to find that our host understood Selye's Russian, and apparently without too much difficulty. The natives are Samoieds, but prefer to be called by the more euphemistic designation, "Kamtchadals". A few hundred live in the native village we had seen from the air; they are fishermen, reindeer-herders, prospectors and trappers.

Time, unfortunately, did not permit a visit to the village; a few natives that we saw near the airport looked to me very much like Eskimo.

It was on the afternoon of Saturday, June 9, that we had left Nome. Now, a few hours later, because in the middle of Bering Strait we had crossed the International Date Line, we found it was Sunday night, June 10. If, tomorrow, Monday, instead of flying west, we returned to Nome, it would still be Sunday.

After a very pleasant meal, our host took us for a walk through the town, following which we retired for a few hours of much needed sleep. When he called us at 2.30 a.m., local time, the morning was crisp and clear with just a touch of frost on the ground. After a well cooked breakfast of veal cutlets, rice, bread, butter, cheese, vodka and tea, we again drove to the plane, and as we took off at 3 a.m. the sun rose through a thin mist over the flats of Anadyr.

Westward, ahead of us, lay one of the largest and least known great mountain systems of the world—the Verkhoyansk, Cherski, Kolyma and Anadyr ranges—a complex system of mountain ranges and plateaux 1,500 miles long and 500 miles wide with peaks rising to over 10,000 feet. So inaccessible has this corner of Siberia been that the great Cherski range, rising to nearly 10,000 feet, was not discovered until 1926.

This part of Siberia also holds the distinction of being the coldest inhabited region in the world. The town of Verkhoyansk, just north of the Arctic Circle, on the upper Yana River, boasts a mean temperature for January of -59° F. with an absolute minimum of -90° F., while recent observations may prove that January, at the small town of Oimyakon, in latitude 63° N., on the upper Indigirka River, is still colder.

The most easterly of these ranges is of moderate height, but 300 miles west of Morokovo we were over the centre of the high, rugged Kolyma Range with sharp, knife-like ridges and deeply eroded V-shaped valleys which obviously were never glaciated. Deep snow lay in the valleys and the lakes and rivers were still ice-bound. Soon afterwards, clouds obscured the view below, but four hours later, just before we crossed the upper Kolyma, the clouds disappeared and a still greater mountain range caused us to climb to 14,000 feet. We had expected to see the town of Seimchan on the upper Kolyma, which is said to have a landing field and to be connected by road to the seaport of Magadan on the Okhotsh Sea. We must have passed north of Seimchan, for we saw neither town nor road. The average height of the range is probably 8,000 feet but some

peaks may approach 12,000. Altogether, this range, or system of ranges, is the most impressive and the most rugged and forbidding alpine scenery I have ever seen. The peaks and north and east slopes were all deeply buried in winter snow but nowhere did I see signs of glaciers or even permanent snow fields. The south and west slopes were free of snow and looked barren and arid. Streams and rivers were few and carried little water. Along some were sparse stands of timber. These must have been the Cherski and Kystabyt ranges. West of them followed the Oimyakonsk plateau with hills of lower altitude and more gentle relief, forested on the south slopes almost to the top, while the north slopes were free of snow and covered with a yellowish-white lichen heath. Judging by their fresh green colour, the forests were probably composed of birch or aspen just coming into leaf; nowhere here did I see forests that looked to be coniferous. The river beds all appeared dry but with huge masses of overflow ice (*aufeis*) in their beds.

Soon afterwards, we left the mountains behind and in the distance saw the Aldan River. We now descended to 3,000 feet and were able to have a good view of the broad, alluvial plain through which the Aldan flows. It still being early in the morning, a



Above:—Alluvial, taiga forest and lake-dotted plain west of the Verkhoyansk Range. In the distant background is the Aldan River.

Left:—Small Siberian village east of Yakutsk. Note that even here the fields have been ploughed with a tractor.

Top right:—The Lena River at Yakutsk; in the foreground a tugboat is towing a raft of logs.



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A SCIENTIST GOES TO MOSCOW

low fog hung over the river, probably because the water was warm, coming, as it did, from far to the south. Long-abandoned river beds and basins of former lakes suggested that the climate was now more arid than in the past. Seven hours and fifty minutes out of Morokovo we had our first view of the Lena River, which here is as broad as the Mackenzie near its delta, and soon afterwards circled the ancient city of Yakutsk. This is an open, sprawling city which looked more impressive from the air than it did later from the ground. Several steamers were to be seen on the river, some pushing barges or towing rafts of timber, while others were docked at the wharves on the waterfront. A few minutes later we landed on a vast dirt landing field and in doing so raised a huge cloud of dust.

We were given a cordial welcome by an Air Force major who accompanied us by car to a hotel or guest house two miles from the field. After a much needed wash-up we all met in the dining room, where a splendid table was set with lace cloth, silverware and cut glass. The meal started with cucumber salad and many toasts in excellent vodka. This was followed by very good veal chops and preserved peaches and a rather sweet pink Caucasian wine. The meal finished with tea and artistically shaped sweet cakes. On

the sideboard stood a magnificent sugar-coated cake—a replica of the Kremlin which, our host explained, the cook had produced on the occasion of Mr. Molotov's visit following his recent return from San Francisco. Before we retired for a few hours' rest, our host promised to arrange a visit to the city of Yakutsk. Our guides arrived at 1 p.m. and the afternoon was spent sightseeing.

The main streets of Yakutsk are broad and straight and have board sidewalks with small, young birch trees planted along them. Except for a few with rough pavements of wood blocks, all are unpaved and very dusty, not unlike those of a small western prairie town. Most of the buildings are one-storied, and (except for a few brick ones belonging to the government) are of log construction and comparatively old. They are unpainted, but nearly all have elaborately carved white window frames and shutters; some of these are most decorative and pleasing with an astonishing multitude of designs.

The city, which was founded in 1632, in 1939 had a population of 27,000. Some streets were thronged with motley, mixed crowds among which we saw representatives of a great many of the 169 ethnic groups recognized in the Soviet Union. Owing to the perpetually frozen ground, Yakutsk has no water or underground sewerage system and everywhere in the streets were water carts drawn by small Siberian horses—strangely anachronistic beside American-made jeeps and shining new motor-cars.

After a visit to the small but interesting Natural History and Cultural Museum, we reached the waterfront along a sluggish channel of the Lena River. Houseboats,



ht.—The city of Yakutsk, which is in latitude 62° N.—or same as Simpson on the Mackenzie River. Agriculture, mining, gold mining and fishing are the principal industries. Climate is continental with a mean of -46° F. for January and 66° F. for July, and extremes of -84° F. for January and 8° F. for July. The city is on a shallow bend of the Lena River, 1,000 miles above its mouth. The Lena at Yakutsk is 15 miles wide; it looks like the upper part of the Mackenzie Delta, and is icebound an average of 210 days each year as compared with 180 days for the Mackenzie.





Main street with board sidewalk, closed in neat picket fences. The high Russian collar which is fairly to the American-nackground.

barges, scows and smaller boats lined the river bank where groups of healthy looking sun-browned children in all stages of undress were bathing, and where two little girls were just then having difficulties with the family cow.

An interesting group of people living on a river barge attracted our attention. The leader of the group or family, a friendly, husky looking redhead, invited us on board the barge and even offered to take us on a cruise on the Lena River in her motor-boat; unfortunately, however, the engine refused to start.

SCENES IN YAKUTSK

Top to bottom:—

Old patrician home, with white-painted and elaborately hand-carved window frames and shutters; for security reasons these are ten feet above street level. In a top-story window two girls obligingly pose for the picture.

Our hotel in Yakutsk was built of beautifully squared logs.

Water-front street

River-boats and barges on the Lena River

Two little girls on the muddy banks of the Lena. One is taking the family cow to the river to be watered; the other is carrying a tub of washing.

Below:—An interesting group of people who live on a house-boat on the Lena River. The red-headed girl-captain (at right) offered to take us sight-seeing in her motor-boat.





Walkways and young birch trees en-
The foreground wears the characteristic
sassy to the wagon shafts. Note the
can- background.

In nearly all the streets were kiosks or booths where hot tea or lemonade was sold by the glass. Long queues marked these places and the government food stores. On the main street intersections, loudspeakers broadcasted music and news to which no one seemed to listen. Also we saw several motion picture theatres, a post and telegraph office, a school, a hospital and even a beauty parlor in which an unhappy looking woman sat under a huge permanent-wave machine, her head covered with foam. Judging by the posters in front of the movie house, the picture then showing extolled the benefits

YAKUTSK THE LENA RIVER

Top to bottom:—

Tea and soft drink kiosks in the streets of Yakutsk and Omsk were frequented only by women. In the foreground children are playing an ancient game with pieces of straw placed in squares drawn in the road dust.

Two modern cinemas; constructed of logs and situated back to back, they are separated by a brick fire wall. The bright-coloured poster advertises the picture "now showing", which is entitled "Vitamins Make You Strong".

Yakutsk hospital. In the foreground is the ubiquitous water cart from which water is delivered to the consumer. Through a wooden funnel and trough, placed on the outside wall of buildings, the water-man empties his buckets into an inside tank.



Above:—Wash day on the waterfront. Except for the Russian lettering on the sides of the barges, this scene might be duplicated anywhere on the Mackenzie River.



The dense mixed pine and birch forest east of the Ural Mountains is harvested in 100-metre strips. In the right background natural reforestation by seeding from the standing strips of timber has taken place.



Extensive Siberian steppe or prairie west of Omsk. The forest growth. The soil is the rich black or chestnut-chenozem type. Only 10 per cent of the land is under cultivation, much of which remains in natural grassland for beef cattle graze. Carefully preserved "islands" of white natural forest.

to be derived from a diet rich in vitamins.

It had been a most interesting but long and hot afternoon, and we were all dead tired when we returned to our hotel for supper and a rest. At 9 p.m. we were again taken to the airport, from which we started at 9.15 on the 2,100-mile hop to Omsk.

Soon after midnight, Tuesday, June 12, our plane descended rapidly in the dark through thick rain clouds to a rough landing, on a small and very muddy emergency landing field (probably at Kirensk) to refuel. Soon afterwards we left the rain behind, and at daybreak flew over low, well timbered country interspersed with farmland and villages. After flying ten and a half hours from Yakutsk we reached the Yenisei, which at Krasnoyarsk is a wide and impressive river. Krasnoyarsk is a large, modern looking city with many factories and a fine airport, and is an important railroad centre. We did not land, and soon reached open prairie-like country with from 10 to 15 per cent deciduous forest cover distributed as irregularly shaped "islands". A surprisingly small proportion, probably less than 15 per cent of the unforested land, is under cultivation, while the remainder, on which large herds of cattle graze, looks like virgin grass-land. Ploughed land surfaces everywhere show rich black (chernozem) soils. Our route followed the Trans-Siberian railroad, along which we

saw many small towns. We had hoped to see Novosibirsk, the Chicago of Siberia, but passed to the north of it.

Everywhere the farms are clustered into villages, usually on the banks of a river and generally not more than two to three miles apart, connected by winding dirt roads or mere wagon trails. Each farm building faces the road or single main street, with a few acres of fenced land extending back from the buildings. Land use appeared to be well planned with a definite rotation system of crops. Although firewood must be the principal fuel used, it was astonishing to find the forests, which here were all birch, so well preserved. The reason obviously is that the value of trees as windbreaks and conservers of soil moisture is fully recognized. Five hours and fifteen minutes from Krasnoyarsk we saw the Irtysh River, and a few minutes later landed at the airport of Omsk. The city is on the west bank of the Irtysh and from the air looked very impressive with its broad streets, many factories, residential suburbs, and network of railroads. Along the waterfront wharves, numerous river steamers were loading.

We were to stop here for the next twenty-four hours, and at once arranged for a visit to the city. After a few hours' rest we set out by motor-car, going first to the University, where a visit to the Natural History Museum had been arranged. Two professors

t. The precipitation (between 6 and 12 inches) does not permit
nut-cenozem that is amongst the most fertile in the world.
much remaining virgin grass-land on which large herds of
of whigs natural shelter belts and help to conserve moisture.

kindly acted as our guides and, with the help of an interpreter, gave an interesting account of the museum collections and of the geology and natural resources of the district. From the museum we drove to the Omsk Agricultural College and Experiment Station a few miles outside the city. Here we were met by the director, Professor Kisurin, well known for his important experiments in plant breeding. Of particular interest were apple crosses that had been made resistant to the dry Siberian winter climate by espalier-like growth. From the low central trunk the branches were trained along the ground in order to assure a protective snow cover.

Returning through the city late in the afternoon, we found the sidewalks crowded with workers leaving the factories, while the streets carried a heavy traffic of trolley-

Siberian village on the rich black soil steppes west of Omsk. The farms are spaced, Russian style, along the single street, each with a few acres of fenced land behind. The large buildings in the upper left corner are modern and suggest that the village has been "collectivized".

cars, oxcarts and horse-drawn vehicles of all descriptions, mechanized transport being definitely in the minority.

Next morning, Wednesday, June 13, after the first good night's rest since leaving Fairbanks, I was awakened early by birds singing in the caragana bushes outside my window. The sun, which had scarcely set the night before, was already high in the sky. We were off at 6.30 a.m., local time, on the 1,600-mile hop to Moscow. We were traveling now at an altitude of a few thousand feet, and had a fine view of the uniformly level prairie-land or steppe which here was 90 per cent under cultivation or summer fallow. As before, small birch woods or wood lots alternated with farm land. Only 10 per cent of the cultivated land was planted to grain. Occasionally shelter belts augmented the natural forest. Streams and lakes were



remarkably few and during the first hour not a single stream of any kind was seen.

As we approached the Ural Mountains we began to see extensive pine forest mixed with birch. Through the forest, often as far as we could see, ran survey lines spaced about one kilometre apart. It was interesting to note that the forest everywhere was strip-harvested. Completely cut-out strips, one hundred metres wide, on which all slash had been burned, alternated with strips of varying age on which the trees, by natural seeding, had returned to the same species. That this was so could be plainly observed by the different hues of green shown in the foliage of the various species. Nowhere did we see any signs of forest fires nor scars of past burns. Altogether it appears that the Siberian forests along our route of travel are exceedingly well managed and have been so for a long time.

In the foothills east of the Urals we entered the extensively industrialized country to which, during the war, Russia's heavy industries were moved. Near Sverdlovsk the countryside is criss-crossed by railroads, and industrial areas almost interlock. We landed at the military airport at Sverdlovsk to refuel and were cordially invited to the officers' club where we breakfasted sumptuously on vodka, caviar, smoked salmon, pickled herrings and champagne. We still had 900 miles to go and took off again soon after breakfast.

The Ural Mountains were disappointing as a mountain range; in fact, they were scarcely discernible as such from the air. We saw no rock exposures, and cultivated land alternated with heavy mixed forest.



All day we had been travelling at low altitudes but now, west of the Urals, the air became very bumpy and so we climbed to 10,000 feet. We flew right over the ancient city of Kazan on the Volga River, the size of which appeared here to compare with that of the Mackenzie at Fort Simpson. West of the Volga we were over the rich black soil area of the Russian steppes, with scarcely any forest and most of the land under intensive cultivation. Here, incidentally, we saw the only instance of soil erosion and gullyng observed during the entire trip.

MOSCOW AND LENINGRAD

Late in the afternoon we circled the vast city of Moscow and were pleasantly surprised to find that comparatively little war damage was noticeable, most of it being in the suburbs. Impressive, as seen from the



At top:—The opening Celebration Meeting of the Academy of Sciences of the U.S.S.R., held on June 16, in the Bolshoi Opera House. (Sovfoto)

The main building of the Academy of Sciences of the U.S.S.R. in a suburb south of Moscow.



air, was the Kremlin fortress in the very centre of the city.

At the airport we were cordially greeted by a committee from the Academy and by a host of still and motion picture photographers. A few minutes later the Yugoslav delegation arrived, also by plane, and was similarly welcomed. We were driven to the Savoy Hotel—where the manageress spoke English with a strong Brooklyn accent.

The opening celebrations of the Academy were to take place on the evening of June 15, so that we had almost two whole days in which to rest and make calls at the Canadian, Australian, British and American Legations and become acquainted with fellow delegates from other countries.

The official reception took place at the Academy, a small former Imperial Palace in a southern suburb. At the head of the

receiving line was Professor V. L. Komarov, President of the Academy, well known to all botanists for his work on the flora of Eastern Asia.

Next day, Saturday 16, was the day of the first Celebration Meeting, which was held in the Bolshoi Opera House, specially decorated for the occasion with great masses of flowers and enormous coloured and enlarged photographs of Stalin and Lenin. On the raised platform were seated the Presidium of the Academy, and the 100-odd Academicians, many of them in military uniforms. Following the opening address of the President, there were speeches by N. Z. Brounevitch on "Two Hundred and Twenty Years of Research in the Academy of Sciences of the U.S.S.R.," by V. A. Obruchev on "Activity of the Academy of Sciences in the Field of Geological and Geo-

The Bolshoi Opera House, Moscow, where the Celebration Meeting of the Academy of Sciences of the U.S.S.R. was held on June 16.





Above:—The Moscow University Law Building

Below:—With its onion-shaped, copper-plated spires, this eighteenth-century Orthodox Russian Catholic church, near a small village by the Moscow-Volga canal, has suffered more from complete disuse than from the ravages of war. Most of its windows are broken, the inside is littered with rubbish, and the once white-washed brick walls show signs of neglect.



Left:—Glazed tile walls and elaborately carved stone parapets adorn this Byzantine town house of a former Moscow merchant prince.



Below:—The Victory Parade in the Red Square, Moscow (Sovfoto)



Above:—Moscow's historic Red Square, where the Victory Parade was held on June 24. To the right are the walls of the Kremlin, in front of which is Lenin's tomb. In the background, to the left, is the famous St. Basil's Cathedral, built during the reign of Ivan the Terrible.



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A SCIENTIST GOES TO MOSCOW

graphical Exploration of the Soviet Union", and by many others. At the conclusion of the meeting the entire Bolshoi orchestra played Tchaikowsky's "1812" overture.

After the meeting there was a splendid banquet in the Moscow Hotel for the delegates. It was a magnificent affair with at least fifteen hundred guests, and lasted until the early hours of the morning. For June 17 a sight-seeing tour had been arranged to the Kremlin, followed at night by a second formal Celebration Meeting held at the House of Unions. The main speakers were: L. A. Orbeli on "I. P. Pavlov and the Russian School of Physiology"; I. I. Meschaninov on "A New Theory in Linguistics"; B. N. Jouriev on "The Soviet School in Aerodynamics"; N. D. Zelinsky on "The Role of the Academy of Sciences in the Progress of Organic Chemistry"; and B. N. Delauney on "P. L. Chebichev and the Russian School in Mathematics". Following these learned speeches, greetings to the Academy from the United States were read by Harlow Shapley, from the Royal Society by Sir Robert Robertson, and from the French Academy of Science by Maurice Coullery.

The week following the formal Celebration Meetings was taken up by informal sectional meetings, by visits to laboratories, museums, and libraries, and by getting to know one

another. As is nearly always the case, these informal meetings proved the most fruitful in establishing contacts of various kinds. In the evenings there were special performances at the opera and the ballet to which all delegates were invited. On the 21st and 22nd there were excursions on the Moscow-Volga canal and to Tolstoy's home at Yasnaya Polyana south of Moscow. Sunday, June 24, was the day of the Victory Parade in the Red Square, for which delegates had been given passes to the grandstand next to Lenin's tomb from which Marshal Stalin took the salute. Despite a steady downpour the parade went off with clock-like precision. In the evening 1,500 delegates left Moscow by special trains for Leningrad.

Next day at noon we arrived in Leningrad where the delegates were met at the station by a welcoming committee which included pretty girls who gave us armfuls of flowers. Following lunch we were taken to the Defence of Leningrad Museum, a most remarkable documentary exhibit that left us deeply impressed with the gallant defence and recent intense suffering of the city. In the evening there was a superb performance of Tchaikowsky's "Swan Lake" at the Leningrad Opera House.

The next two days were devoted to special meetings of the various groups and

Right:—In the shadow of the walls of the Kremlin, Russian children play volleyball in the former Imperial Garden.

Bottom left:—One of the main locks on the Moscow-Volga canal

Bottom right:—The two younger members of this group of peasant girls, returning to their village from the field, were quick to discard their clumsy work coats when the photographer's camera appeared.



Below:—The Klim Vorochilov, a modern, streamlined, diesel-powered twin-screw river-boat, in one of the locks on the Moscow-Volga canal.





Above:—St. Isaac's Cathedral on Isaac's Square, Leningrad

Top left:—The tall, graceful spire of the Admiralty Building in Leningrad



Left:—View from the Neva Embankment, Leningrad, showing the New Palace Bridge to Vassilievsky Island; to the right is the tall spire of the cathedral of the Peter and Paul Fortress, which contains the graves of all the Russian Tsars; to the left is Peter the Great's "Cabinet of Curiosities", Russia's first museum, and the Leningrad branch of the Academy of Sciences of the U.S.S.R.

by visits to the Botanical Institute and Garden with its herbarium of five million botanical specimens, to the famous Arctic Institute, the new Geophysical Institute, and to the Pavlov Laboratory. In the Arctic Institute we saw charts showing the work of the Russian ice-patrol along the Arctic Coast Shipping Route where the Institute operates seventy-seven weather stations, each equipped with radio and manned by three to four trained meteorologists and observers; some stations have air bases from which, during the season of observation from March to October, 1944, observation planes flew 2,000 hours, reporting ice conditions by radio. In addition, these stations carry out magnetic observations and serve as bases for visiting scientists.

On the 27th there were excursions to the ruined Pulkova Observatory and to Tsarkoié-Sélo, the beautiful former summer palace of the Tsar, now known as Pushkin, and also largely destroyed during the war. Of the main wing only a hollow shell remains. On the evening of the 27th, the Leningrad Soviet entertained 1,500 delegates at a grandiose banquet in the magnificent Uritsky Palace overlooking the Neva River.

Returning to Moscow on the 29th, we passed through country that had seen some of the heaviest fighting during the war—a desolate country of destroyed cities, towns and villages, blasted trees and farms, blown-up bridges, water-filled dug-outs and trenches, burnt-out freight trains and tanks; and along the railroad embankments were

graves now almost hidden among masses of gaily coloured spring flowers. That evening, in Moscow, we attended a special concert in the Bolchoi Opera House at which some of the most outstanding Russian soloists performed.

June 30 was largely given up to interviews and to preparations for our departure. In the afternoon we attended a reception given by the Society for Cultural Relations with Foreign Countries, generally known as V O K S. This lasted until 6 p.m., and barely gave us time to dress for the farewell dinner given by the Soviet Government in the grand St. George's banquet hall in the Kremlin, at which Marshal Stalin, President Kalinin, Foreign Commissar Molotov and other members of the Government were our hosts.

On July 2, my two fellow delegates started their return trip by way of Siberia, the way we had come, while I travelled with the Swedish and Finnish delegates by Russian plane to Helsinki and, thence by Swedish plane, chartered by the Soviet government, to Stockholm, where for two weeks I was to accompany an excursion of Swedish foresters and forest botanists to northern Sweden, before returning to Canada by air via the Atlantic.

To the visiting foreign delegates the two weeks in Moscow and Leningrad represented a truly delightful experience which augured

well for future collaboration and friendship between the scientific workers of the Soviet Union and the rest of the world. Everywhere the delegates had been received with traditional Russian hospitality, not only socially but also in the laboratories and libraries of Soviet research institutions. A frank willingness to share information was everywhere in evidence, and many delegates left Moscow with huge gift-packages containing the printed works of their Russian colleagues. This all clearly shows that the Russian scientists and the Soviet Government recognize the need for international co-operation in science. In an important speech delivered in Moscow on June 23, Professor Kapitza stated the future policy of the Academy as follows:

(1) To enlarge and extend the publication of scientific work in foreign languages, and to publish monographs in Russian, English or French; (2) to arrange or take part in international congresses, and (3) to exchange scientific workers between the U.S.S.R. and foreign countries.

Surely this speaks well for the future; it is to be hoped that scientists and their governments throughout the world will take advantage, to the fullest extent, of the lead given by the Soviet Union, and co-operate with and meet half-way the aims of the Academy of Sciences of the U.S.S.R.

Bottom right:—The main entrance and the chapel of the now-ruined former Imperial Palace at Tsarskoïé-Sélo.

Below:—Of the main wing only an empty shell remains.





Aerial Surveys in Ontario

by J. M. BISHOP

MANY IMPORTANT BOOKS and papers have been written on the subject of photogrammetry which have proved of great value to those wishing to make a complete study of the subject. In fact, so many books and articles have been written on the technical and scientific side of aerial surveying that it will not be attempted, in this article, to give anything further along that line.

There is, however, a fast-growing group of people who are just beginning to realize that photographs taken from the air show many things that can be of interest of the layman. In the hope that it will be found interesting by this larger group, an effort will be

made in this article to tell in everyday terms of the beginnings, growth and present functions of one organization which is devoted almost entirely to taking aerial photographs and utilizing them for purposes of surveying and map making.

One of the divisions of the Department of Lands and Forests, Ontario, is known as the Division of Surveys and Engineering, and Mr. C. H. Fullerton, Surveyor General, is its Chief. This division has two sections known as Ground Surveys and Aerial Surveys; it is with this latter section that we are concerned here. The *Journal*, in its April issue, published an article on ground

At top:—Fig. 1—Shaded sections show vertical photography carried out by the Ontario Department of Lands and Forests up to August 31, 1945. Long narrow strips indicate highway location; solid blocks—mainly timber surveys.



Plane used for photography in the north country, where lakes are numerous.

surveying and those who read it must surely see, after completing this article, that ground surveying and aerial surveying have much the same relationship as father and son. Ground surveying dates back a long way, while aerial surveying is a comparatively new thing. In this case the "son", in all likelihood, will never reach the point where he is independent of the parent, for aerial surveying definitely relies on ground surveying for "control". However, the new member of the family has already reached the stage of development where he can make an important contribution to the work that was for a long time "dad's" sole responsibility.

It is not difficult now, looking backwards, to determine the time when the Aerial Surveys Section came into being, although, in many ways, it, like Topsy, "jest growed".

Back in 1922, Mr. R. N. Johnston, a forester in the employ of the Department of Lands and Forests, had the vision to see that photographs from the air might serve as a means of obtaining, more easily and quickly, information concerning the amount and quality of the forest cover in this province. (In passing may we mention the fact that, in 1942, this same Mr. Johnston, now Chief of the Research Division, was lent by this government to the United States Army in British Columbia and was able to make a considerable contribution to the speeding-up of the task of locating the route followed by the Alaska Highway.) A staff of photographers, plotters and draughtsmen was gradually built up until, at the present time, eleven men are employed, six of them returned men, and are hard pressed to keep up with the demand for service.



A section of the Queen Elizabeth Way, including the Cooksville-Port Credit Cloverleaf. Note the clarity with which farm buildings, wood lots, and even single trees and buildings are delineated.

During the past five years an average of 8,422 square miles per annum has been covered by vertical photography, and the total area covered until August 31st, 1945, was 65,659 square miles. How this compares with the total area of the province may be seen in Figure 1, which shows the location and extent of the sections covered by vertical photographs.

Besides this, in the earlier years of the Aerial Surveys Section's existence, 10,780 square miles were covered by oblique photography. Also, 26,903 square miles have been covered by sketching from the air. The only oblique photography that is done now is the taking of low level "shots" of some particular feature, such as a building, bridge or grade separation on a highway.

During the first few years oblique photographs were used entirely, but in 1926

there began to take place a rapid change-over to vertical photographs because the latter were found to lend themselves to more accurate and more rapid plotting methods.

For the bulk of this work, the plane flies at an altitude of 10,900 feet above the average ground level for the operation. Our cameras operated at this height give, on the contact prints, a scale of 1,320 feet to the inch, or 4 inches to the mile. More and more frequently now, however, an altitude of 8,250 feet is called for, and this height gives a scale of 1,000 feet to the inch on the prints.

It would astonish many people to learn what a wealth of detail may be read from an aerial photograph taken at that height. Very recently a farm-owner, on being shown for the first time an aerial picture of his property, exclaimed because he dis-

AERIAL SURVEYS IN ONTARIO

covered that there were in his orchard several dead trees about which he had not known.

Another thing that would probably surprise the layman is the relative scarcity of good weather for aerial photography. From a study of a fifteen-year period it has been reckoned that only three days per month, on an average, have been clear enough to permit the taking of photographs from eight or ten thousand feet up in the air. What may seem, on the ground, to be a perfect day is frequently spoiled for the aerial camera by clouds or by haze too thick to pierce with filters.

The section undertakes no work of a strictly private nature, but carries out surveys for its own department and other departments of the Provincial Government. Also, work is undertaken for concerns which have obtained the right to cut timber or pulpwood on Crown lands. For these latter companies, and for the parent department,

the main bulk of the work consists of the making up of "type maps", which, by means of an established legend, give valuable information as to the size, species and quality of the forest cover.

The Department of Highways makes extensive use of vertical photographs in locating routes for new road construction and in revising old locations. They are also found very helpful in locating sites for bridge and grade separation structures.

The Department of Mines uses photographs to save much time in locating rock outcroppings and geological formations which warrant close study on the ground.

The Hydro-Electric Power Commission makes use of them in choosing routes for transmission lines and in locating dam sites for power-development projects. Two outstanding examples of the latter are the Ogoki River Diversion and the Longlac Diversion. It is interesting to note that

Close-up of the completed Cooksville-Port Credit Cloverleaf

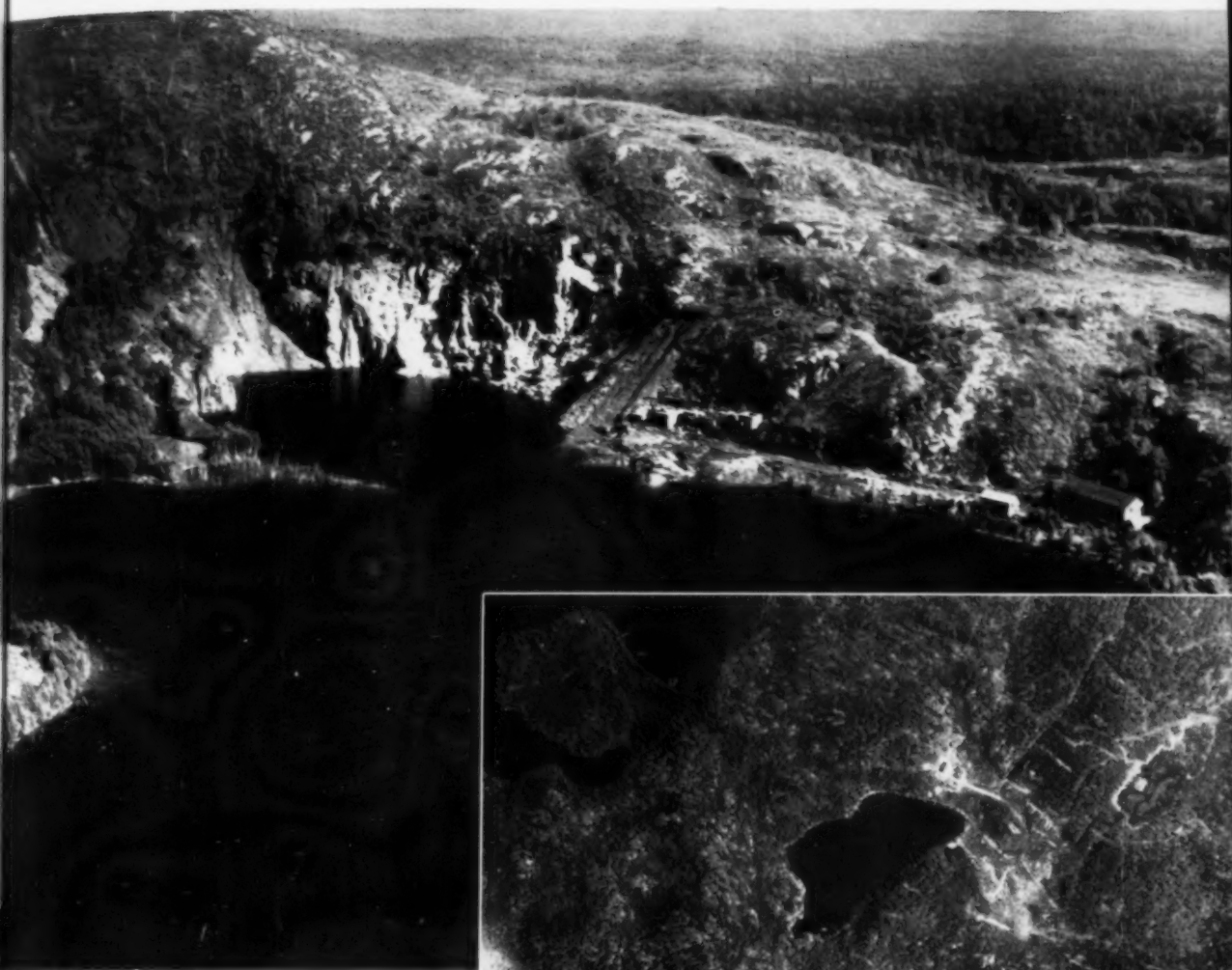




Right:—Helen Iron Mine, Algoma District, 1931. There is more than "just rock" in some of these hills!

"Before and After"; upper left shows survey made for location of the Trans-Canada Highway east of Longlac, while lower right shows the completed highway. Herringbone pattern represents areas where pulpwood has been cut.





*Right:—Mining camp and trenching
—Swayze mining area*



photographs were taken in 1942 for the new power development project on the Upper Ottawa River.

Equipment

Before the equipment used by the section is described, it should be pointed out that it is certainly not the "last word" in kind or quality. The main reason is, of course, that for the past four or five years the armed forces of our own and allied countries have required practically all the cameras, films and developing equipment that manufacturers could produce. Other users had to "make do" with what they already possessed.

The most important item of photographic equipment is the camera itself. At present the section has two Fairchild cameras, an F3 and a K3. These take a roll of film $9\frac{3}{4}$ inches wide and 75 feet long, and it is possible to make as many as 110 exposures, 9 inches by 7 inches in size, on one roll. For these cameras there are extra magazines that can be interchanged in flight quickly enough to avoid losing continuity in covering the ground. To provide for the taking of vertical photographs, a hole is cut in the floor of the plane and the camera set in a special mount. This permits it to be tilted in any direction so that it is level at the



Left:—Loading camera into plane. This photograph gives some idea of the size of camera used in aerial surveys.

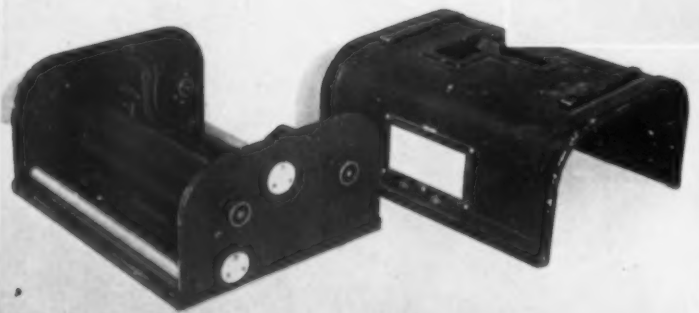
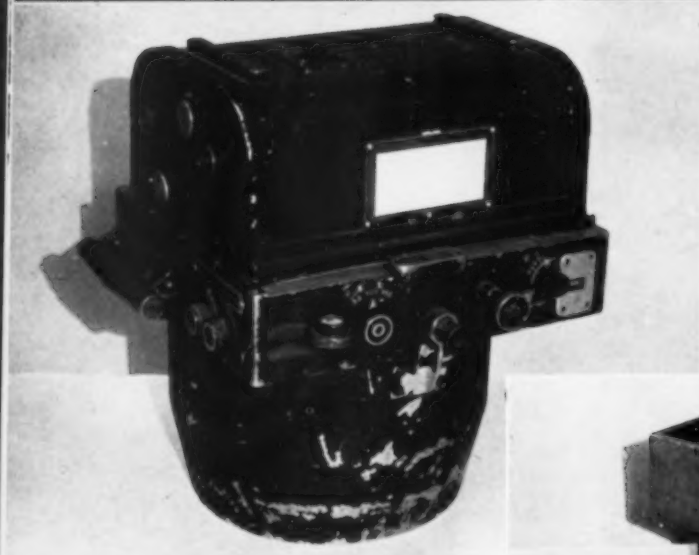
Centre left:—Camera, Fairchild, K-3

Centre right:—Camera cone and body

Lower left:—Camera magazine

Lower right:—Camera mount

Inset:—Left to right: filter, light-meter and sight



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Darkroom—printing line



Above:—Fig.2—Printer (referred to in text on following page.)

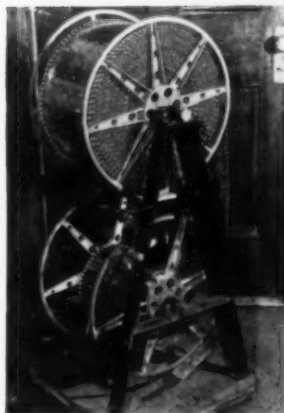
moment of exposure, and to be turned through any angle necessary to compensate for "crab" in flying. The photographer also has with him a special sight by means of which he determines the ground speed and so gauges the interval necessary between exposures. The camera can be wound and the shutter tripped electrically, and an intervalometer can be set to space the exposures. A red light comes on in time to warn the operator to have the camera level at the moment the shutter is tripped. Other items of the photographer's equipment are a stop-watch for checking the interval, and various filters which are used for cutting through haze and for varying the time of exposure.

The shutter speed of the camera can be set at either 1/50, 1/100, or 1/150 second but, by means of light filters fixed over the lens, the actual exposure can be cut to the equivalent of 1/1000 second. The light meter is always used to gauge the shutter speed required for the atmospheric conditions which prevail for each operation.

Procedure

Before going out to cover a "job", the photographer obtains three copies of the best map available at the time, and on these marks the strips as he intends to fly them. Two of these "flight maps" he takes out on the operation; the other copy is kept in the office for reference when the exposed film is sent in.

Darkroom—developing churn



Darkroom—developing apron and reels

The photographer makes out a flight report for each roll of film exposed. This report is submitted with the roll and the information given on it is used to determine the length of time necessary for developing that roll. As soon as the film has been developed and dried it is examined, reference being made to the afore-mentioned flight map, to see if the exposure is correct and if there are any gaps in coverage. Speed in doing this is necessary because the photographer must remain on the job to take "filler" strips if necessary.



*Abitibi Pulp and
Paper Company,
Iroquois Falls*

For mapping purposes consecutive exposures should overlap each other by 60 per cent and each strip of photographs across the area should overlap those on either side by at least 12 per cent.

When the film has been checked, it is cut into individual negatives and these are numbered. The next step is the printing (see Figure 2), and heavy paper with a dull finish is used because the prints have to stand a great deal of handling and must take pencil and ink marks readily. When this work has been completed the prints go to the mapping staff and a comparatively long and intricate process is begun.

Plotting

The methods used in plotting are rather difficult to describe in non-technical lan-

guage. Maps can be made up either to the scale of the contact prints or to a smaller scale, if desired. A base map, which incorporates all the best available ground survey data on hand, is laid down as a control. Each photographic strip is then plotted in turn and tied in to the control on the base map and to the detail of the strip laid down before it; thus the "assembly" grows. The plotting systems used are designed to prevent telescoping or stretching the strip, or swinging it to either side.

Many devices have been designed to aid in this process and Figures 3 and 4 illustrate two of them. The former is a stereoscope and, by means of it, as with the old-time parlour curio, the ground common to two adjacent photographs may

*Fig. 3—Stereoscope, used for
reading photos in the third
dimension.*



Smoky Falls power development, Mattagami River



be viewed in three dimensions. This instrument is used for marking lines of different elevation on the photographs. The latter instrument is known as a sketchmaster and by means of it the topographic detail of the photograph may be superimposed on the base map beneath and drawn in directly. This instrument is very useful in mapping to the scale of the prints.

In some cases a set of photographs is all that is required by the customer but, where mapping is required, three types of maps can be turned out. The first, of course, is the planimetric, which shows all the detail, such as lakes, rivers, roads, buildings, etc. This kind of map is always the foundation for the other two types—the form-line and the timber-type map.

The form-line map shows the conformation of the ground, bringing out the contrast between rough and smooth country and revealing the relatively gentle or steep slopes. These maps are used in the selection of road or transmission-line routes, as already noted, and for determining the best location for power-development structures.

The timber-type map is designed to give a graphic record of the kind and relative importance of the forest cover. Such maps are valuable to the Timber Management Division and to commercial concerns that have been given the right to cut timber or pulpwood.

Another type of work that should be mentioned is the making up of a mosaic or composite photograph. The section is often



Fig. 4—Sketchmaster, by means of which detail is transferred from photo to map.



called upon to make up a mosaic of a whole township, six or nine miles square. This is very "tricky" work; for instance, the prints must be set in place while wet and shrinkage in drying must be taken into account. Mosaics make a very useful form of map for some purposes, but should not be used for accurate scale measurements because of unavoidable distortion in the corners of the photographs which makes it impossible for the prints to be tied in to each other with absolute accuracy.

Conclusion

Here, then, "the defence rests its case". As was pointed out earlier, no attempt has

Top left:—Montreal River Bridge—Algoma Central Railway. The A.C.R. traverses some of the best "bush country" in Northern Ontario. This photograph shows a mixed stand of spruce and hardwood.

Below, left:—Agawa River Falls, Algoma District. In right foreground is shown a heavy stand of hardwood.

Below:—Purgatory Chutes, Pagwachuan River. Note good stand of spruce and jack pine.



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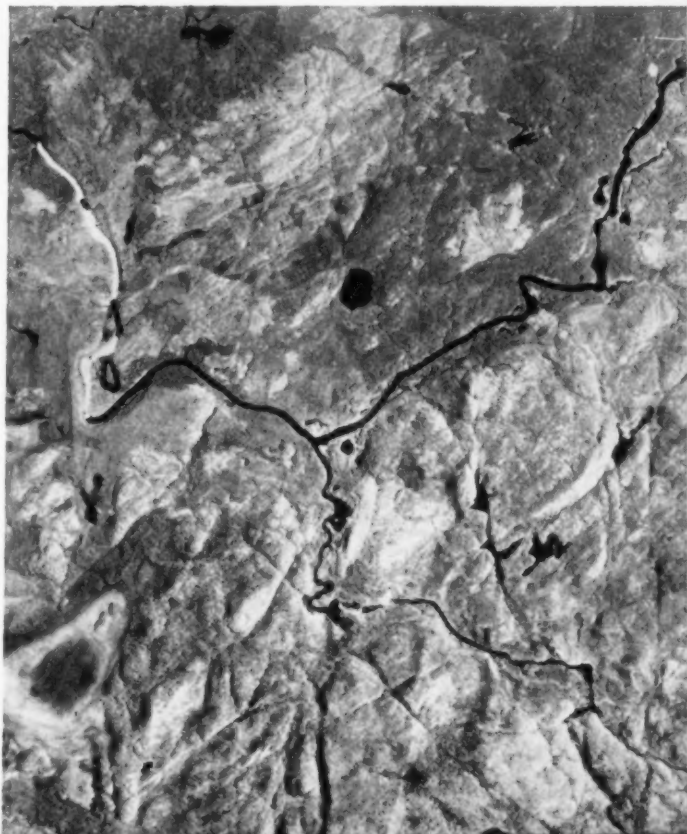
AUGUST 27 1944.

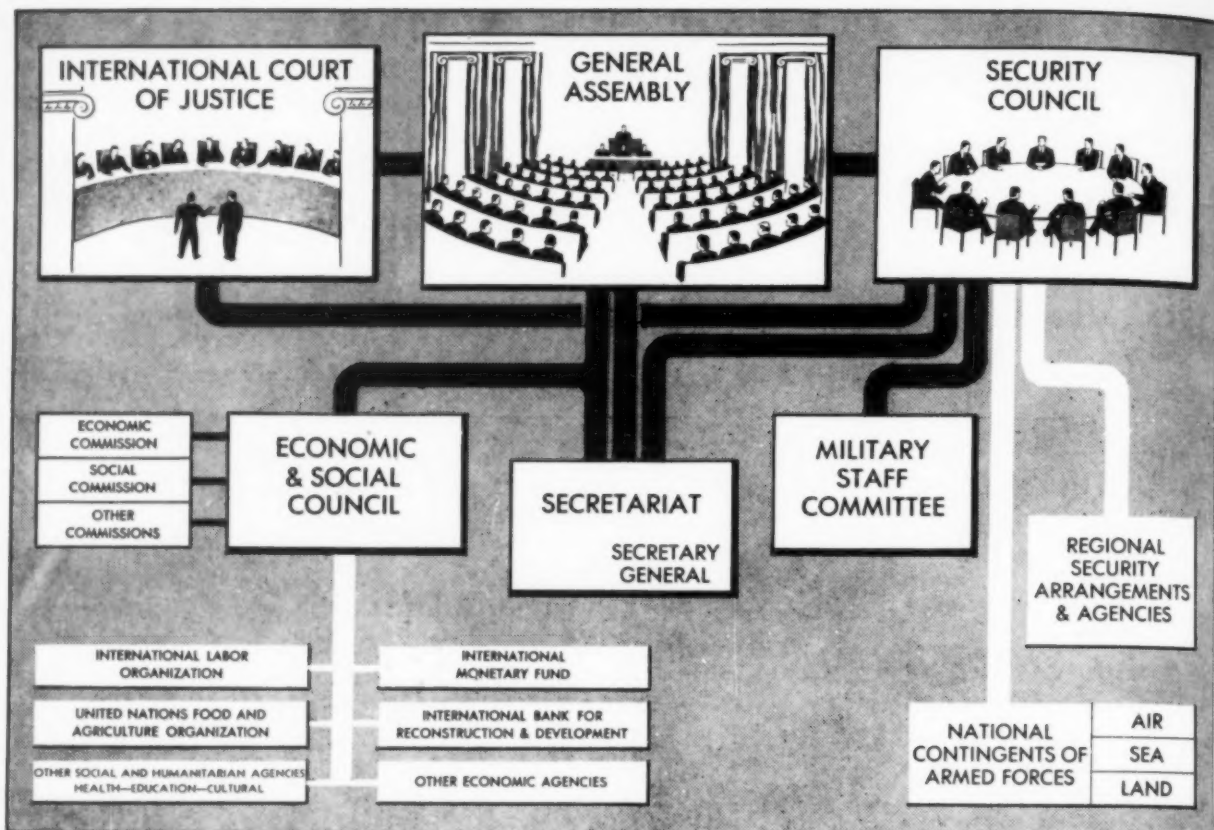
Reduction of a mosaic—Kapuskasing mill and townsite. Note pulpwood floating in river and aerodrome at upper left.

been made to go into the question of aerial survey methods in a technical way. For those who are interested in that aspect of the work, reference may be made to such publications as:—"Surveying from Air Photographs", by Capt. M. Hotine; "Air Photography Applied to Surveying", by C. A. Hart; and the "Manual of Photogrammetry", issued by the American Society of Photogrammetry.

It is hoped that this brief article will serve to stimulate interest and answer some of the questions in the minds of that growing group of people who are just now becoming aware of the fact that photographs taken from two or more miles overhead may have very real significance, if only indirectly, in their own living economy.

Mosaic—junction of Sandy and White River, Pukaskwa area. Pulpwood floating in river shows white. Rocky outcrops show light gray. Note fast water at upper right-hand corner.





Courtesy U.S. Dept. of State

The First Assembly of the United Nations

by B. T. RICHARDSON *

THOUGH the old League of Nations failed, the idea of collective peace and security did not die. World War II provided the second opportunity to establish a world security organization, for it produced a war coalition against the Axis powers. The plan to project the war coalition into a future world organization appeared even before the United States of America and Russia were attacked. The Atlantic Charter of August, 1941, a joint declaration by the Prime Minister of Great Britain and the President of the United States, asserted: "After the final destruction of the Nazi tyranny, they (Great Britain and the United States) hope to see established a peace which will afford to all nations the means of dwelling in safety within their own boundaries and which will afford assurance that all the men in all the lands may live out their lives in freedom

from fear and want". The Charter also spoke of "the establishment of a wider and permanent system of general security".

The war coalition came into formal existence on January 1, 1942, when twenty-six nations signed the United Nations Declaration in Washington. In itself, this Declaration did not envisage a permanent union. But Soviet Russia accepted the concept of coalition for security in peace as well as war in the Anglo-Russian Treaty of May, 1942. Experts of Great Britain, the United States, and the Soviet Union came together at Dumbarton Oaks, in Washington, D.C., in August, 1944, to prepare a preliminary draft of the Charter. At the San Francisco Conference in April-June, 1945, fifty nations accepted the draft, with some amendments. The blueprint was ready. The First Part of the First Session of the United Nations Gen-

London correspondent for the *Winnipeg Free Press*

eral Assembly was held in London from January 10 to February 16, 1946.

The new union of nations has become steadily more inclusive on a global scale. These were the twenty-six original signers of the United Nations Declaration: United States of America, United Kingdom, Soviet Union, China, Australia, Belgium, Canada, Costa Rica, Cuba, Czechoslovakia, Dominican Republic, El Salvador, Greece, Guatemala, Haiti, Honduras, India, Luxembourg, Netherlands, New Zealand, Nicaragua, Norway, Panama, Poland, South Africa and Yugoslavia.

Twenty-one more states adhered to the Declaration before the San Francisco Conference. In order of adherence, they were: Mexico, Philippine Commonwealth, Ethiopia, Iraq, Brazil, Bolivia, Iran, Colombia, Liberia, France, Ecuador, Peru, Chile, Paraguay, Venezuela, Uruguay, Turkey, Egypt, Saudi Arabia, Syria and Lebanon. At the Conference, four more states were admitted to the list, in time to become original signers of the Charter: the Ukrainian and Byelorussian Republics, Argentina and Denmark. This brought the membership to fifty-one nations, but only fifty United Nations signed the Charter at San Francisco, as agreement on recognition of the Polish Government was not reached until after the Conference ended. No new members were admitted at the First Part of the First Session of the Assembly, though a number of states have begun to explore their prospects of admission. Albania applied in December, 1945, and the application was supported by Yugoslavia and the Soviet Union in London, but action was postponed. At Potsdam, in 1945, the Big Three agreed that European neutrals, except Spain, would be admissible. Several applications will probably come up in forthcoming Assembly meetings. The Swedish Government, for instance, has asked its Riksdag for authority to join the United Nations. Applications must be recommended by the Security Council, where the veto applies, and approved by the majority of the Assembly.

Thirteen European countries remain outside the United Nations, with the result that one of the most important world areas of

postwar settlement is under-represented. Besides Albania, European absentees from the Assembly included five former neutrals—Sweden, Switzerland, Ireland, Spain and Portugal; and seven former enemy states—Italy, Austria, Hungary, Romania, Bulgaria, Finland and Germany. Several Soviet Republics may seek admission in due course.

The Assembly met in the Central Hall, Westminster, under conditions still influenced by wartime austerity. This building has an ample auditorium, normally serving for Methodist Church meetings and other public purposes, in the heart of metropolitan London. Most of the committee work was conducted in Church House near by, where the Preparatory Commission had been established for several months. This was where the British Parliament met, during the war, after bombing of the Houses of Parliament forced their removal to another place. Church House is the headquarters of the established Church of England.

Language difficulties multiply at an international conference, especially of an organization which has grown as quickly as the United Nations. In London the language rules agreed on at San Francisco were observed. The official languages were English, French, Russian, Spanish and Chinese, though English and French were the working languages chiefly favoured by delegates. Still, any delegate was entitled to use any language, and a staff of translators was on hand to interpret speeches at all meetings of the Assembly, its commissions and committees. A speech given in English was immediately given by a translator in French, and vice versa. A speech given in Russian, which was frequently employed by the Russian, Ukrainian and Byelorussian delegations, was translated into French and English. Spanish was used infrequently and no speeches, I believe, were made in Chinese.

Paul Henri Spaak (pronounced Spawk), the Foreign Minister of Belgium, was elected President of the First Assembly. His election was the first item of business and the Assembly was not unanimous. Andrei Gromyko (Gro-meeko) of the Soviet Union nominated Trygve Lie (Trig-vee Lee), the Foreign Minister of Norway. The result

of a secret ballot was Spaak 28, Lie 23.

But Mr. Lie was chosen Secretary-General of the United Nations, an appointment for five years, with salary of \$20,000 (U.S.), plus allowances. The contest over this position took place in private in the Security Council. Lester B. Pearson, the Canadian Ambassador to the United States, had support from the United Kingdom, United States and many other delegations. The Russians were known to favour the Yugoslavian Ambassador to the United States, M. Stanoje Simic. No American nominee was put forward, in view of the decision to locate the organization's headquarters in the United States, though General Dwight Eisenhower was mentioned and would have been a strong candidate. By general agreement, Mr. Lie was an excellent choice. As an active member of the Norwegian resistance during the war, he formed a link with the new political forces of Europe and bridged the gap between the west and the east in that continent. An outstanding statesman of a smaller power, he won the favour of delegates who prefer to restrict big-power domination wherever possible. Above all, Mr. Lie won confidence on all sides as a man likely to fulfil the basic requirement of the civil service of the United Nations; that is, that he must become the complete servant of the new international community regardless of former national allegiances. He is the executive head of the Secretariat and the chief administrative officer of the whole organization.

As provided in the Charter, the principal organs of the United Nations are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the Secretariat, (with provision for subsidiary organs which may be found necessary). After election of its President and the Secretary-General, and after setting up the Security Council and the Economic and Social Council, the Assembly proceeded with a general debate on the report from its preparatory Commission. Sometimes called by Americans "the Town Meeting of the World", the Assembly heard major speeches from forty of its fifty-one delegations. These speeches revealed that a considerable ad-

vance in international thinking had occurred since the San Francisco Conference. Even in that short interval, the production of atomic energy and its application to war (though not yet to peace) had created new issues in world relations for which mankind was seeking the answers. Even as the organization of the United Nations was just becoming a working reality, some of its members were talking of expanding it into a world government. The abatement of national sovereignty was considered by some as essential to the success of the world organization. As Louis S. St. Laurent, the Canadian Minister of Justice, put it: "Sovereignty must not mean liberty to defeat the purposes of international peace".

Pervading all these speeches was the conviction that the new organization must be dynamic and flexible enough to adjust itself to change in the future. The United Nations must avoid the danger, which arose in the old League of Nations, of resting too much upon the *status quo*. Most significant for the future were the affirmations, from speaker after speaker, of reliance upon the United Nations in the foreign policies of their countries.

The committee structure of the General Assembly consisted of seven main and three special committees. The main committees were: General; Political and Security; Economic and Financial; Social, Humanitarian and Cultural; Trusteeship; Administration and Budgetary; and Legal. The General Committee served the Assembly as a steering agency to direct business through the appropriate channel and to organize the agenda. The special committees dealt with matters affecting the United Nations Relief and Rehabilitation Administration, the League of Nations and the permanent headquarters of the United Nations.

All of the thirty-three plenary sessions of the General Assembly were not devoted to general debate. A resolution proposing to establish an Atomic Energy Commission, presented by the United States on behalf of the five permanent members of the Security Council and Canada, was forwarded by the Political and Security Committee. It was adopted unanimously by the Assembly. The Atomic Energy Commission will con-

sist of the eleven members of the Security Council and Canada. Its reports will go to the Security Council, to be made public and to be transmitted to the Assembly in appropriate cases.

This committee's terms of reference required it to inquire with the utmost dispatch into all phases of the problems raised by the discovery of atomic energy. It was asked to report particularly on proposals for extending scientific information for peaceful ends to all nations, for control of atomic energy to ensure its use only for peaceful purposes, for elimination of atomic weapons and all other major weapons from national armaments, and for effective safeguards by inspection and other means against violations and evasions.

A proposal from the United Kingdom that close co-operation should be established between the United Nations and UNRRA was adopted by the Assembly, leading to the creation of a special committee of eleven nations (six of them already members of the central council of UNRRA) to consult with members regarding additional contributions for postwar relief and to urge non-members to join UNRRA. Through this special committee the Assembly will receive full reports on UNRRA work.

From its Administrative and Budgetary Committee, the Assembly received a variety of detailed proposals dealing with staff, salaries and international status of United Nations employees, as well as the creation of a working capital of \$25,000,000 for the organization, and the annual budget, which was fixed at \$21,500,000 for 1946. Assessments will be made on the basis of "comparative income per head of population".

The election of fifteen judges of the International Court of Justice was carried on by secret ballot simultaneously in the General Assembly and in the Security Council, under the provision that each successful candidate must secure a majority in each. There were 76 nominations for the court. The Canadian candidate, J. E. Read, Legal Adviser of the Department of External Affairs, was one of those elected on the first ballot.

A proposal by the Philippine delegation that the United Nations call an international

press conference was placed on the agenda of the Second Part of the First Session of the Assembly, to meet next September in New York.

Approving a report from its special committee, the Assembly agreed to take over the functions and assets of the League of Nations, reserving the right to decide not to assume any particular function. Functions of a non-political and technical character would be maintained through specialized agencies of the Economic and Social Council. The transfer, it was recognized, would be negotiated with the supervisory commission of the League of Nations.

A decision to locate the interim headquarters of the United Nations in or near New York City was made by the Assembly on the basis of a report from its Committee on Permanent Headquarters. The permanent headquarters will be located in the general region of Stamford-Greenwich in Connecticut, U.S.A. A Site Commission of experts and representatives of the members of the United Nations was approved for the purpose of deciding upon the exact site to be used.

As the work of the United Nations proceeded in the Assembly and its committees, sometimes flowing smoothly, sometimes encountering contentious issues, world attention was rivetted upon the Security Council. In his opening address as President, Mr. Spaak said: "At San Francisco there were two opposing conceptions of the organization; one system has triumphed, one which confers particular influence upon the great powers. That system, having been adopted, must now be accepted." The system to which he referred was incorporated in the provisions of the Charter, which vested the final responsibility for maintenance of peace in the world upon the Security Council of eleven members, and which, in addition, stipulated that substantive decisions could be made only with unanimity among the five permanent members, provided that the parties to a dispute, whether they were permanent members or not, should not vote. The permanent members are the United States, the Soviet Union, Great Britain, China and France.

The other six members would be elected for two-year terms, due regard being given to the contribution of members to maintenance of international peace and security and also to equitable geographical distribution. On the first ballot Brazil, Egypt, Mexico, Poland and the Netherlands were elected. Canada had 33 votes, Australia 23. After two fruitless efforts to break the deadlock, Canada withdrew and Australia took the sixth place. In the First Security Council Brazil, Australia and Poland will sit for two years, but the others only for one year, as the Charter provided for retirement of three members each year. They are not eligible immediately for re-election.

The "two opposing conceptions" came into conflict in the earliest stages of organizing the United Nations. The differences crystallized at Dumbarton Oaks, where United States, United Kingdom, Russian and Chinese experts failed to agree on the question of voting in the Security Council. One view is that the Security Council is merely the rubber-stamp for approving decisions of the Big Three. Since the Council deals with enforcement matters which are military in nature, it is held to follow that it represents nothing more than a projection of the war alliance operated under American, British and Russian leadership. This view is not exclusively Russian in its origins. It was, in fact, the view which determined the United States Senate's decision to ratify the Charter.

From it stems the contention that the real basis of the United Nations is the unity of the great powers. This cannot be denied, but some authorities go further. They foresee the evolution of the United Nations into a true federation. Under the Charter the primary responsibility for maintaining peace and security is vested in the Security Council by all the members. All the members will furnish a contribution according to their capacities to enforce peace and, therefore, it is argued, they cannot relinquish a voice in the decisions. Other functions, of course, are delegated by the Assembly to other subsidiary organs, such as the Economic and Social Council and the Trusteeship Council.

Voting rights in the Security Council were decided at the Yalta Conference, on the basis of a formula put forward by the American delegation led by President Roosevelt. On procedural matters, a simple majority of seven members will suffice to make a decision. On all other matters, the majority of not less than seven must include all permanent members, provided that parties to a dispute do not vote. This is the veto right of the great powers.

One result of the election of Australia was that the Australian delegate, Mr. N. J. O. Makin, became the first President of the Security Council. This office goes by monthly rotation, in alphabetical order, according to the English spelling of names of the member nations. Brazil follows Australia, with China next and so on. The Security Council, according to the Charter, is "to be so organized as to be able to function continuously".

Mr. Makin was thrust into a role that was far from being as routine as had been expected. In the interval between the San Francisco Conference and the First Assembly, a great deal of provisional work was performed by experts on the Executive Committee of the Preparatory Commission and also on the Preparatory Commission itself. Taking the Charter as the foundation on which to build, they had planned many details of procedure and interpretation by which the organization might operate. But, owing to the opposition of the Soviet Union and the United States, no comprehensive rules of procedure had been devised for the Security Council. The First Session of the Assembly would divide its work, it was thought, into two parts. The work of the First Part would be "primarily organizational", consisting, in the main, of examining and adopting the proposals regarding procedure and the organization of the Secretariat, ironing out difficulties of interpretation, and electing the Councils and the Court. The Second Part, which it was then contemplated would be held in the spring of 1946, would see the organization actually in operation, tackling the real problems of world affairs and postwar settlements.

This scheme broke down, for the first real test of the Security Council could not be

delayed. The delegation from Iran, on instructions from the Teheran Government, brought in a complaint against the continued presence of Russian forces in Iran. Almost immediately, the Soviet delegation brought a complaint against the presence of British forces in Greece, and the Ukrainian delegation entered a similar complaint against the presence of British forces in Indonesia. Later, Syria and Lebanon lodged a joint complaint about the continued presence of French and British troops in their territory.

The United Nations Charter envisaged the settlement of disputes or situations by pacific means and by military intervention. The use of force by the United Nations was not, of course, involved or implied in any of the first complaints heard. Six courses are open for peaceful settlement of a complaint. They are listed in Articles 33 to 38 of the Charter. The parties involved in a dispute or situation shall first seek a solution by direct negotiation and they may be called upon by the Security Council to do so (Art. 33); if they fail to settle it, they must refer the problem to the Security Council, which, if the dispute is regarded as a danger to peace, will decide whether to recommend a method of solution or an actual solution (Art. 37); the Security Council may investigate to determine if a danger to peace is involved (Art. 34); any nation, whether a member of the United Nations or not, may bring a dispute to the notice of either the Security Council or the General Assembly (Art. 35); the Security Council may intervene and recommend appropriate methods of adjustment (Art. 36); with the consent of parties to the dispute, the Security Council may act as an arbitrator in any dispute (Art. 38).

The Iranian appeal to the Security Council was made under Art. 35. Mr. Andrei Vyshinsky, the Russian Vice-Commissar for Foreign Affairs, declared that Russia was "categorically opposed" to the Security Council discussing the matter. The Russian case relied on Art. 33—that direct negotiations had not been exhausted. The day after the Iranian appeal was made, the government at Teheran resigned. Its successor stood by the complaint to the Security Council, but opened direct negotiations with

Moscow. The Iranian delegation submitted a memorandum on its case, running to 30,000 words. When it had heard both sides, the Security Council directed the parties, under Art. 33, to seek a settlement by direct negotiations.

The Greek case, brought before the Security Council by the Russian Delegation under Art. 35, produced a debate between Ernest Bevin, the United Kingdom Foreign Secretary, and Mr. Vyshinsky, which attracted wide attention. At first Mr. Vyshinsky declared that the Greek situation was a menace to world peace and demanded the withdrawal of British troops. Mr. Bevin, recounting the legality of the British position, argued that Britain was acting as a policeman in a troubled situation. He turned the attack directly on the Soviet Union, mentioning Russian influence in Romania and Bulgaria and accusing the Communist Party of resuming a "war of nerves" against Britain and against world peace. In the background of this controversy, many observers felt, was a contest for the role of champion of social justice in world affairs. At the point of deadlock, in which Russia was standing firmly behind its accusations and Britain was demanding exoneration, each side moderated its position. Mr. Vyshinsky said Russia would not insist on withdrawal of British troops, nor press the charge that a threat to peace existed. The British concession was to waive the demand for acquittal from the Russian charges. In the course of debate, delegates of the United States, Australia, France, China, Poland, Egypt, Brazil and the Netherlands expressed opinions that the presence of British troops in Greece did not create a danger to international peace and security. The debate ended with a statement by the President, Mr. Makin, that the matter was closed, with no formal decision.

The complaint lodged by the Ukrainian delegation, led by Dimitri Manuilsky, against the presence of British troops in Indonesia also came under Art. 35, which, as stated, goes no further than allowing a dispute or situation to be aired. The British case was that its troops were fulfilling their allied assignment of disarming Japanese troops. The Netherlands delegation sup-

ported this. Prime Minister Sjahrir of the Indonesian Republic had indicated that his Nationalist supporters preferred the British to remain until the Japanese had been disarmed and removed. Again Mr. Bevin made a strong defence, and the debate dragged on for several days. Mr. Vyshinsky suggested that the United Nations send a commission of inquiry, but Mr. Bevin objected and the Security Council rejected the suggestion. The Indonesian case ended, as had the Greek case, with an exhaustive debate on the substance of the complaint but with no formal decision by the Security Council. A Ukrainian proposal that a commission be sent to "establish peace in Indonesia and report to the Security Council" received only two votes. An Egyptian motion that it be clearly understood the British troops would not be used against the national Indonesian movement but to disarm the Japanese and liberate the country bore an implication to which Mr. Bevin objected. It also was defeated. Finally a Russian amendment that a commission should be sent "with a view to clarifying the situation in Indonesia" received only three votes. Following this failure to agree on the wording of a resolution covering the Indonesian situation, the President announced: "The matter is now closed".

The appeal of Syria and Lebanon was heard by the Security Council directly from delegates of those countries, though they were not members of the Council. After lengthy debate, the Security Council had difficulty in deciding on the wording of a resolution which would convey its collective opinion. A motion from Mr. Stettinius, the permanent American delegate to the United Nations, expressing confidence that foreign troops would be withdrawn and that negotiations to that end would be undertaken without delay, received seven votes, the required majority. But Mr. Vyshinsky quickly reminded the Council that Russia had not voted for it, and so had vetoed it. Both Britain and France indicated that they would nevertheless follow the spirit of the majority decision and negotiate with Syria and Lebanon for the withdrawal of troops.

In all these instances, there was a great

deal of what Prime Minister Clement Attlee called "the cut and thrust of debate". The result was to focus world attention upon each of four troublesome situations in turn. It had been argued at San Francisco that publicity would be a useful, corrective device for the United Nations. Experience in London proved this. The Security Council was used to bring up charges and to air them with ample scope for defence and with opportunity for the expression of views from other members on methods of solution. The force of public opinion clearly exerted strong influence on the delegates. First steps towards a solution in each case were readily found.

First steps were also taken towards providing "teeth", or enforcement machinery, for the United Nations. The Charter provides that the Security Council shall have a Military Staff Committee, consisting of the chiefs of staff of the United States, the Soviet Union, the United Kingdom, China and France. All members of the United Nations are bound to make available armed forces required to maintain peace, in accordance with special agreements made by each (individually or in groups) with the Security Council. Plans for the use of such forces will be made by the Military Staff Committee, whose first step would be to initiate these agreements. The first meetings of the committee were held in London in February. It was expected that several months would be required to launch the military agreements.

The First Part of the First Session of the Assembly, held in London, did not undertake to set up the Trusteeship Council, which was provided in the Charter as one of the principal organs of the United Nations. This will be done later. Inaugurating a new world system for the administration of dependent territories brought under trusteeship by the powers, or placed in trust by a former administering country, the Trusteeship Council will consist of countries administering trust territories, along with an equal number of non-administering members and any great powers who are not administrators of trusteeships.

From this it follows that the Trusteeship Council cannot be established until some territories have first been placed under trustee-

ship. The United Kingdom delegation announced that negotiations would commence at once for placing Tanganyika, the Cameroons and Togoland under the trusteeship system. These territories have been held under League of Nations' mandate. Australia announced similar action with respect to its New Guinea and Nauru mandates, and New Zealand with respect to Western Samoa.

Belgium also announced its intentions to negotiate with respect to Ruanda-Urundi, its mandate territory, which was attached to the Belgian Congo in 1919. The position of France was that, while willing to carry on the administration of its mandates of Togo and the Cameroons, these territories had been integrated with France and their people had elected delegates to the French Constituent Assembly; any change would, therefore, have to be approved by them. South Africa announced that it would not draw up a trusteeship agreement for its mandate of the former German South-West Africa until the freely expressed will of European and native residents was ascertained. The legislature of South-West Africa, it was noted, had asked for amalgamation with South Africa. The Liberian delegate, among others, took exception to the South African attitude. Completion of trusteeship agreements in order to allow establishment of the Trusteeship Council by the time the Second Part of the First Session of the General Assembly meets (in September) was anticipated.

The belief that the new peace must be founded not only on political co-operation among the nations of the world but also upon economic co-ordination of their policies to promote the well-being of all the peoples of the United Nations, finds expression in the Economic and Social Council.

The Economic and Social Council was set up by elections in the General Assembly on January 12. It consists of eighteen members; for three years: China, Peru, France, Chile, Canada and Belgium; for two years: the Soviet Union, the United Kingdom, India, Norway, Cuba, and Czechoslovakia; for one year: the Ukrainian Soviet Socialist Republic, Greece, Lebanon, the United States, Colombia and Yugoslavia. In these elections

a deadlock occurred between New Zealand and Yugoslavia for the eighteenth seat. New Zealand retired as a gesture of co-operation.

The delegate for China moved a resolution in the Economic and Social Council that an International Health Conference be organized. The date was set for June 20, 1946, in Paris. The United States proposed that the United Nations organize an international conference on trade and employment, for which the American Government had already done considerable preparatory work. A sub-committee was formed to report on this. On the motion of the United States a special Committee on Refugees and Displaced Persons, to sit in London, was established. Another American resolution was accepted, providing for a temporary Commission on Transport and Communications to report on proposals to co-ordinate these services. What the members of the Council called the "nuclear commissions" (because they are relatively small and their final composition has not yet been determined), will deal with activities first discussed at the San Francisco Conference and approved as the major concerns of the Council. These are the Commission on Human Rights, the Temporary Social Commission, the Statistical Commission, an Economic and Employment Commission, the Temporary Transport and Communications Commission and a Sub-Commission on the Status of Women; these commissions will consist of nine members. The first commission to be fully established was that on Narcotic Drugs. The others will be definitely established at future meetings of the Economic and Social Council, which fixed its second meeting for May, 1946. Within these broad limits the work of the Council was begun.

The final stages of the First Part of the First Session of the Assembly were devoted to the pressing problem of fighting famine and starvation in many parts of the world. A resolution sponsored by the great powers called urgently for greater supplies of wheat and rice. It was not the future world and its peace and security that demanded immediate attention, but the fact that in the wake of war millions of people were hungry and many would die before assistance could reach them.



BIRMINGHAM — The Progressive City

by F. W. BRADNOCK

WHAT is it about Birmingham that attracts visitors from all parts of the world?

It is a large city, admittedly, but cannot, by the greatest stretch of imagination, be classed as a health resort or an inland spa; it offers no gay whirl of night life; it has few historical associations, and boasts no ancient town walls or Roman remains.

Nevertheless, before the war Birmingham was visited by travellers from all parts of the world; during the war it was one of the most popular leave centres in the country and many members of the Canadian Armed Forces went away with pleasant recollections of the Queensberry Club, Provost's

House and the Beaver Club; and, now that peace has once more returned, Birmingham is again extending a welcome to visitors from afar—visitors who come, in most cases, with a definite purpose.

Generally they are people with a thirst for knowledge, interested in modern industry and eager to learn how Birmingham, with its 50,000 acres and 1,000,000 inhabitants, became known the world over as the best-managed city. They come here to delve into the mysteries of its 1,500 different trades, to see the famous "factory in a garden" of Cadbury Bros. at Bournville, or the largest single-unit motor factory at Longbridge, or

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to discover just how the City Council has brought banking facilities to the man in the street by operating successfully a municipal bank in which practically every artisan family has an account—or how there can possibly be an income of £97,000 a year from the contents of the city's dust-bins.

They come to learn how Birmingham's 50,000 municipal houses are managed, or, perhaps, to place orders for power presses,

or pins—and practically anything in between, so diverse are the products of its varied industries; or northwards from Stratford they come, after inspecting Shakespeare's birthplace, to examine the world's finest Shakespeare collection housed here in the Public Library.

Birmingham, then, is a city alive to all that is new in industry and municipal management—and a city which, in a way, feels

Top left:—Municipal houses on Bandywood Road, Birmingham

At top:—Central Place—showing recent improvements; Central Fire Station is in background.

Right:—A general view of Birmingham's business section



proud that it was singled out on seventy-seven occasions for the attentions of the German Luftwaffe; the scars still remain: gutted churches, open spaces where the houses of its citizens once stood, its famous market hall in the Bull Ring a roofless shell, and unfamiliar blanks in its shopping thoroughfares. But reconstruction has commenced; out of the trials of six years of war a finer Birmingham will emerge, and the same craftsmanship that supplied the allied nations with tanks and buttons, huge bombers and cap badges, machine guns and steel helmets, will provide the world—and, it is hoped, Canada in particular—with motorcars and bicycles, electrical equipment and fine jewellery, radio sets and railway coaches.

Birmingham, however, is not just an industrial city, and in her area of eighty square miles expansion has developed on planned principles. Bournville, representing the first application of town planning, remains to-day a distinguished example of a satellite town designed to accommodate a great industry and to house comfortably its thousands of workers; Edgbaston, considered by many the most charming suburb in England, retains its green spaciousness within a mile of the centre of Birmingham, while the city itself is famed for the extent and beauty of its parks and open spaces. Aston Park, with its enchanting hall where Charles I was entertained two days before the Battle of Edgehill, is publicly owned, while generous public gifts have added such

attractions as Cannon Hill, the city's principal ornamental park; and the Botanical Gardens, with their glass-houses, rock gardens, animals and birds, provide the visitor with another excursion, while the ancient Royal Chase at Sutton Coldfield lies at the city's boundaries.

The hills and woods at the Lickey's, owned by the Council, cover nearly 500 acres (which area means a great deal more in England than in Canada) and provide Birmingham's most popular playground. Here, from Beacon Hill, a thousand feet above sea level, the Midland loveliness of England may be seen stretching over ten broad counties.

Sport is well catered to, from ice-skating to billiards. Birmingham and football are almost synonymous (Aston Villa, Birmingham City and West Bromwich Albion, a few yards over her boundary, have their results printed in newspapers throughout the world), while cricket, that most English of games, is played everywhere from the County Ground at Edgbaston to the roughest ground imaginable on a bomb-cleared site. Golf courses are provided by the municipality, and over twenty swimming pools accommodate two million bathers a year.

For indoor entertainment it is only necessary to mention the City of Birmingham Orchestra (with which are associated the names of Sir Adrian Boult, the late Leslie Heward—and now George Weldon, rapidly making a name for himself as one of Eng-



Modern industry; a large machine shop at Icknield Square Works



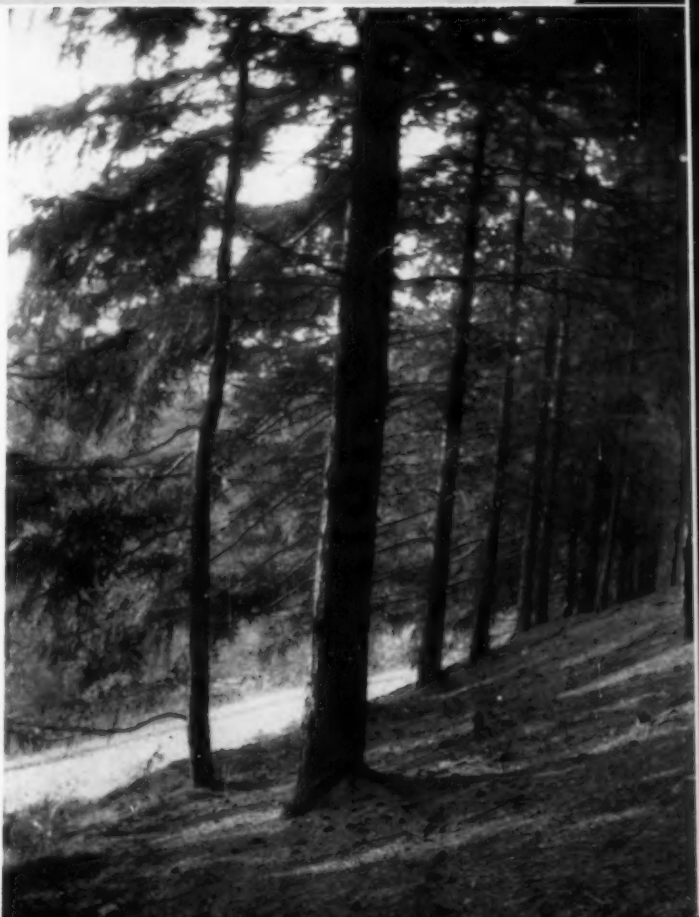
The boating pool in Cannon Hill Park

land's leading conductors), the world-famous Repertory Theatre, variety theatres and nearly a hundred cinemas.

And, when the visitor has explored the offerings of Birmingham, there still remain, at her very threshold, the gentle Warwickshire countryside, the castle and timbered houses of the county town, the Shakespeare country, the blossoming loveliness of Worcestershire, the orchards of Evesham, and the uplands and valleys of the Cotswold Hills.

This, then, is Birmingham—a city of industry and civic enterprise, set in the heart of some of the most beautiful countryside in England—where a welcome awaits all visitors, and where the staff of the city's Information Department at the Council House will do everything possible to make their stay here interesting and enjoyable.

Cofton Woods at Lickey Hills





*The Council House, which
faces Victoria Square.*

*Part of England's largest
chocolate and cocoa works
(Cadbury Bros. Ltd.), as it
appears during the work-
ers' lunch hour.*



*Chamberlain Place,
Birmingham*

Vic

*St. Martin's Church and
the Bull Ring*



*Municipal offices — the
first portion of Birming-
ham's new civic centre*

Victoria Square



JAMES WILSON MORRICE—Pioneer of Modern Painting in Canada

by DONALD W. BUCHANAN

BY THOSE interested in modern painting in Canada, personal vision and individual expression on the part of the artist are to-day taken for granted. This was not so, however, forty years ago. Such qualities were then little appreciated by Canadian collectors. Yet, at that time, although he was a lonely and unique figure among his Canadian contemporaries, our first great painter of the modern movement, James Wilson Morrice, was already at the full height of his career.

Among the first to depict that subtle elegance of colour to be found in snow and ice, Morrice always insisted upon an honest understanding of the atmosphere of his native land. This comes out clearly in a letter which he wrote in 1910 to a friend in Toronto. "As you say", he states, "these English dealers with their ghostly Dutch monochromes have poisoned everything. Healthy, lusty colour which you see in Canada is no doubt considered vulgar."

His story is that of a wanderer between continents, of a painter in advance of his time in Canada, spending much of his life in the more receptive atmosphere of Paris, yet returning home year after year to sketch the winter landscape of his native Quebec. In his travels he mixed in some of the most cosmopolitan society of his day, and numbered amongst his friends such famous novelists as Somerset Maugham and Arnold Bennett, both of whom knew him well and have recorded their memories of him in several of their books. There is, for example, a distinct resemblance between him and the character Priam Farll in Bennett's *Buried Alive*.

His voyages are recorded for us in at least five hundred small panels and about two hundred canvases, to be found to-day in public and private collections on three continents. A horse and sleigh crossing the St. Lawrence in winter, dark-shawled Italian women in the public gardens of Venice, an Arab with a donkey on the beach at Tangiers, a group of French artisans on a Sunday outing along the banks of the Seine—such are the subjects. Diverse enough they are, and yet alike. Over each hangs an atmosphere—to describe a visual sensation only too inadequately in words—of dreamlike and languid meditation.

Born in Montreal in 1865, the son of a wealthy merchant of Scottish extraction, Morrice was, as he grew up, destined by his

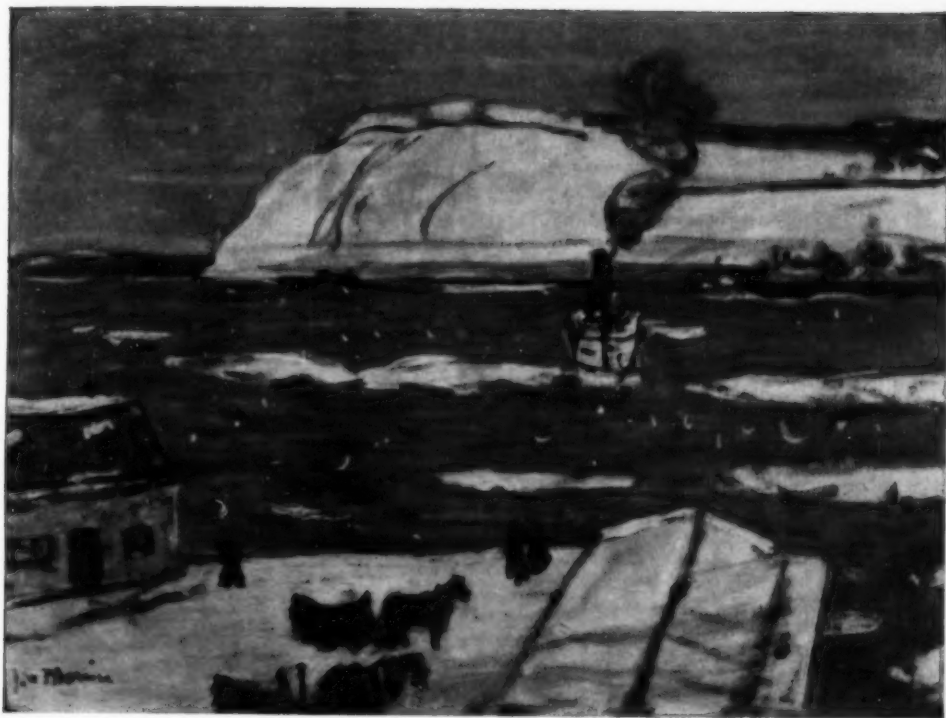
parents to enter the legal profession. After graduating from the University of Toronto and from Osgoode Hall, however, he quickly deserted the law for painting. Already he had done many water-colours, but his first real apprenticeship in art began after he was twenty-five, when he went to Paris.

He worked independently and with little reference to the schools or teachers, although he was influenced first by the works of Whistler and later by those of the more vital French masters of the day. His talent was strong and soon became recognized in Europe. Appreciation of him by his fellow artists grew with the years, and, following his death, the Autumn Salon in Paris, an organization which had fostered the best of contemporary painting in France, prepared a retrospective exhibition of his works, an honour bestowed, in its history, on few foreign artists.

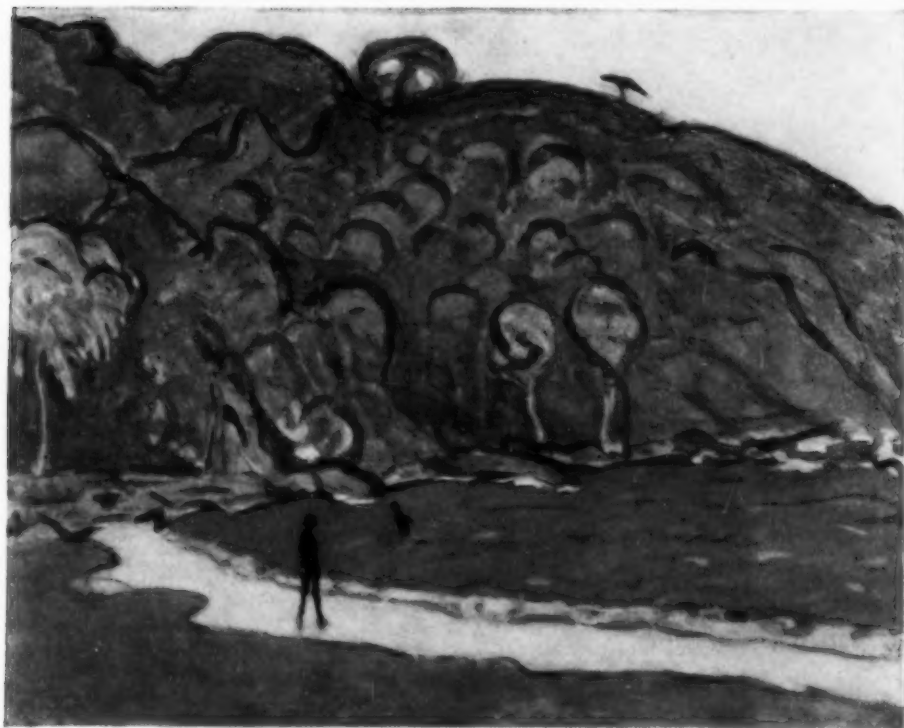
Equal recognition, particularly for his later paintings, came more slowly in Canada. Such paintings as "The Ferry, Quebec", when exhibited in the period from about 1908 to 1910, attracted enthusiastic comment in Paris but were hardly noticed when shown in Montreal. Yet, despite this lack of appreciation at home, it was only towards the end of his life that Morrice forsook his native land entirely.

Before that time, when on his winter visits, he had sketched the snow-bound villages of the lower St. Lawrence and the old squares of Montreal. But finally the West Indies began to attract him instead, and during 1919 he did some of his best work on the sunny beaches of Trinidad. In these last canvases of his, it seemed as if he had decided that if the values were true, he could leave his drawing as free, as simple and as personal as possible. But he had not many years left in which to paint with this new freedom, for he died in 1924 while alone on one of his solitary voyages in Tunis.

The creations of his prime—those canvases of lush foliage, of tropical waters and sandy coves—were not exhibited in Canada until many years afterwards. During the early nineteen-thirties, however, when they began to be shown in Montreal, they helped by stimulus and example to give various of our younger Canadian painters the courage and inspiration to move forward towards a more unfettered art.



*"The Ferry, Quebec", by James Wilson Morrice**



*"The Beach, Trinidad", by James Wilson Morrice**

*From the collection of the National Gallery of Canada



The Canadian "Barren Lands"

by S. C. ELLS

The "barren lands" of Northern Canada extend east and northwest from Hudson Bay, and comprise an area of several hundred thousand square miles. Apart from very occasional thickets of small spruce and widely scattered individual trees—chiefly in the transitional zone between true forest lands and barrens—the area is devoid of forest growth. During the brief northern summer, however, mosses, grasses and hardy flowering plants flourish.

The greater part of "the barrens" is underlain by Precambrian rocks, and consequently the terrain is, in places, somewhat broken by rugged scarps and gullies. Inland from Baker Lake the underlying rocks are of sedimentary origin and the terrain is marked by long and very gently undulating slopes with occasional scarps of sandstone.



*The great sky-sign of the Northland hangs over the northern plain,
And the Northland beckons her children—nor beckons to them in vain,
And she spreads her treasures before them with free and lavish hand,
And cries, "Too long have ye named me Canada's barren land".*

From "Northland Trails" by S. C. Ells

The surface of the barren lands is almost entirely devoid of minor streams, but is, however, traversed by rivers which are navigable by small craft; and, within the areas lying between these main drainage channels, innumerable small ponds and lakes occupy shallow depressions. For the most part, these bodies of water have neither inlets nor outlets.

As a source of minerals of economic value, certain areas of the barrens must be regarded as of potential value.



Wellesley Island, one of the Thousand Islands, was in the news last year when Canada Steamship Lines acquired the Thousand Islands Club, shown above, from United States interests. The Club is located near Alexandria Bay, New York, and is only a short distance from the famous International Bridge opened some years ago by the late President Roosevelt and Prime Minister Mackenzie King.

THREE HUNDRED and some years ago a canoe thrust its way up the placid waters of the St. Lawrence. In contrast with the bronze skins of the Indians at the paddles were the velvet clothes, glistening breast-plate, and jewelled sword of the single white man in the boat. The canoe made its way to the shore and the white man placed a white and gold flag in the ground. His name was Jacques Cartier and he claimed all the land that the great river touched for the King of France.

In the long years that followed, the river was a thoroughfare for men whose names will always have a place in America's history — Frontenac, LaSalle, Cadillac, Carleton, Wolfe, and a galaxy of others. Noblemen came from the courts of Europe and set up along the river feudal estates that rivalled the most brilliant of the Old World. Travelers along the river ate from silver platters and slept on silk coverlets when the rest of America was a howling wilderness. The courtly Champlain founded the "Order of Good Cheer" to insure that the art of good living would not be lost in the New World.

As the news of the great wealth of America came back to European capitals, Kings and emperors struggled for possession of the new

continent. The clear waters of the river were reddened again and again as the men in the white and gold of France, the scarlet of England, the buff and blue of the Continental forces, and the hunting shirts of the early settlers fought in a series of wars that lasted two hundred years. Then, one day, the last shot was fired and the peace that has lasted over a century had started.

The Thousand Islands has claimed royalty as well as commoner. The Lost Dauphin of France is said to be buried near here and Jerome Bonaparte set up a miniature court on the river where distinguished visitors were escorted through the forest by a company of Imperial Grenadiers.

The traditions of hospitality and good cheer that have distinguished this region through all its long and brilliant history have not been forgotten. Rather are they being revived as tourists from both Canada and the United States are rediscovering this storied and unique vacation land.

A cruise ship which runs on a regular schedule between Toronto and Prescott is shown in this aeroplane view as she steams through the fabulous Thousand Islands region.



EDITOR'S NOTE-BOOK

A. E. Porsild (B.A. Copenhagen) was born and educated in Denmark, and from his earliest boyhood, which he spent in Greenland, has been interested in the Arctic and in Arctic botany. In 1925-26, on a Carlsberg Foundation research grant, he visited American universities and herbaria, and afterwards went to Alaska to study reindeer and reindeer-grazing problems on behalf of the Dominion Government, with which he has been associated since. From 1930-35 he was in charge of introduction of reindeer from Alaska to the Mackenzie District, and since 1936 has been Curator of the Herbarium of the National Museum. During these years he has travelled widely in Alaska, Canada, Greenland and Northern Europe, and has spent no less than seventeen summers and eight winters north of the Arctic Circle. At the beginning of the war he was appointed Canadian Consul to Greenland, where he spent three years. He is a world authority on Arctic and boreal plants, and has published 40-odd papers on Arctic botany and geography. A Fellow of The Canadian Geographical Society, he was one of the earliest contributors to its *Journal* (see May, 1930). In his present article, published in this issue, he tells of his journey and experiences last June when, as a delegate of the Society, he attended the Congress held at Moscow and Leningrad to celebrate the 220th Jubilee of the U.S.S.R. Academy of Sciences.

* * *

J. S. Bishop (who for the past two years has been in charge of the Aerial Surveys Section

of the Division of Surveys and Engineering, Department of Lands and Forests, Ontario) brings nearly a quarter of a century of experience to the task of presenting the work of his department to our readers. Born in Toronto, he received part of his education there and the balance in Brampton, London, Lindsay and Belleville, all of Ontario.

* * *

Lawrence J. Burpee—See biographical sketch in January, 1946, issue.

* * *

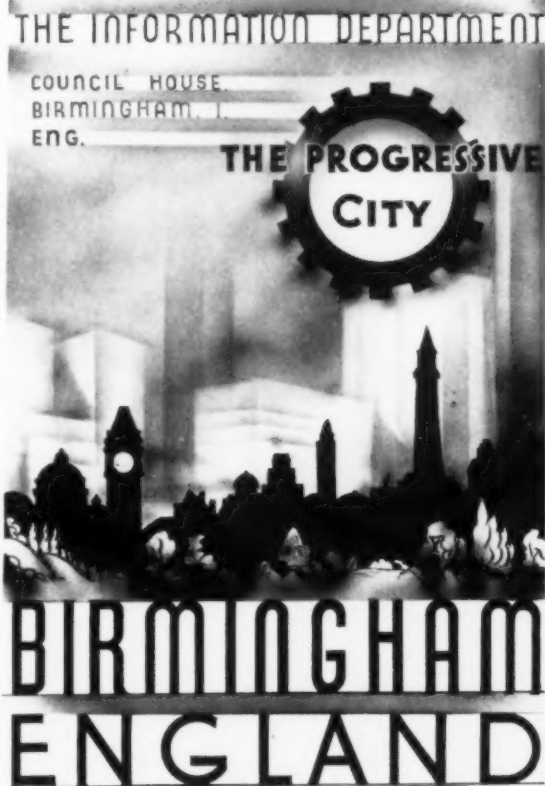
Donald W. Buchanan—Donald W. Buchanan, author, journalist and art critic is already well-known to readers of the *Journal* (see "Mormons in Canada", II, 255; "Waterton Lakes Park", VI, 69; "Canada and the University City", X, 81; "The Story of Canadian Art", XVII, 273; "Canada on the World's Screen", XXII, 70; "Defence Outpost for North America", XXIII, 106; "Canadian Movies Promote Citizenship",

(Continued on page XIII)

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(Continued from page XII)

XXVIII, 120.) A graduate of the University of Toronto (B.A. in Modern History), he was awarded the Wilder Fellowship, and continued his studies at Oxford University, England. Mr. Buchanan is at present

Supervisor of Special Projects for the National Film Board of Canada. Previously he promoted the establishment of the National Film Society of Canada, and before his appointment to the Film Board was Director of Talks for the C.B.C.

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